

The crisis of post-war Japanese growth model: Minskian interpretation of the **rupture of a coherence and the emergence of a new Model**

KIM Kye Hwan

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Introduction

Since G.L.S. Shackle, the role of surprise as an unexpected or counter-expected event is well-known to economists. It calls into question the system of representing agents and launching an investigation. Surprise is therefore key in the evolution of the knowledge structure of an economic agent¹. This role of surprise is no different in the field of scientific research. As noted by T. Lawson,

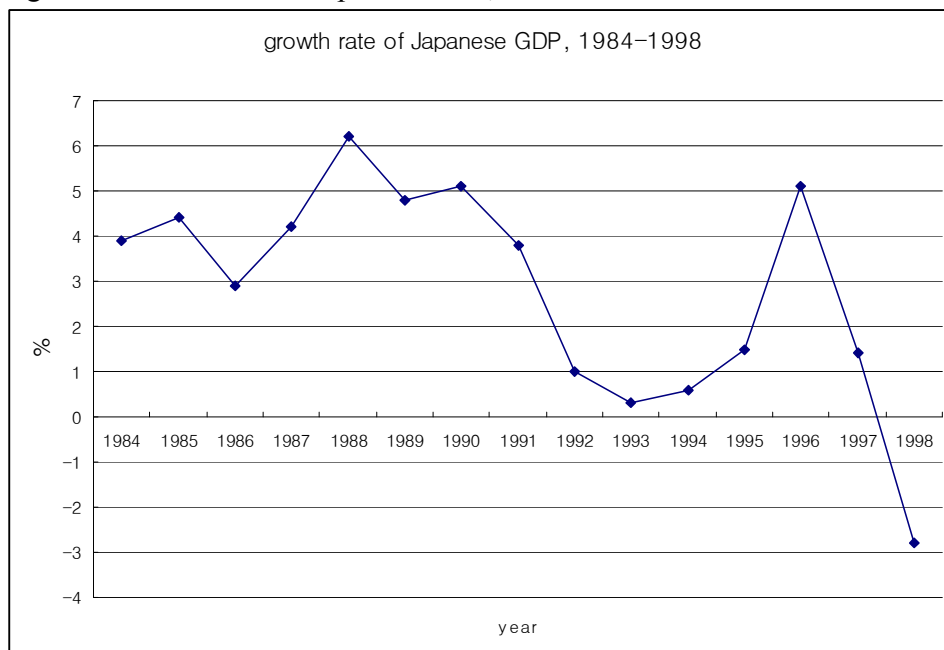
« Theoretical explanatory enquiry is likely to be initiated or further stimulated where contrastive demi-regs occasion a sense of surprise, doubt or inconsistency, either between the observed phenomenon and a set of prior beliefs, or between competing explanations of it, and so forth. »²

This research also begins with surprises. What are the surprises and how are they formulated?

Cyclical or systemic crises?

A comparison of macroeconomic performances since the mid-1980s presents a significant contrast (figure 1).

Figure 1: Growth rate of Japanese GDP, 1984-1998



Data sources: Agnus Maddison, 2003, *The global economy: historical statistics*.

Japanese economic crisis began in 1990, when the Nikkei index collapsed,

¹ J. Sapir, 2005, *Quelle économie pour le XXIe siècle?*, p. 98

² T. Lawson, 1997, *Economics and Reality*, p. 211

followed by real estate prices. The "real economy" was affected beginning in 1992, when the growth rate fell to 1 % and began an overall decline in most economic indicators: output volume, consumption, price of wholesale and retail trade, and investment. After a short reversal in the 1996-1997 fiscal year, recession attains -2.8 % in 1998³. Between 1990 and 2000, the growth in labor productivity in Japan was 0.87 % / year, while that of the United States was 2.16 % / year and 1.60 % / year in the European Union⁴.

The first question is regarding the nature of these crises and how to explain them, whether they are cyclical or systemic.

This crisis, first financial, has been analyzed as a cyclical crisis by many economists. *Japan's financial crisis and its parallels to U. S. experience*⁵ compares the Japanese and American financial crisis from the mid-1980s to the early 1990s.

On the other hand, according to R. Boyer, according to more regulated approach⁶, the Japanese crisis of 1990s can be classified as a "big systemic crisis". It is not about traditional macroeconomic cycles in Japan as they do not correspond to the contour of the succession of an expansion and recession phases⁷. The Japanese crisis of 1990s must therefore be considered a **big crisis** in the sense that the spontaneous sequence of adjustments within the mode of regulation does not lead to a **resorption** of disequilibrium accumulated in the expansion phase⁸.

In Japan, in the matter of exiting the crisis, there are two schools of thought, those supporting structural reforms, i.e., the emphasis of competition and support of most institutions of liberal capitalism; and "conservatives", who feel that the lost decade does not implicate the institutional and social erosion of the foundations of the post-war Japanese economy. Another dispute regarding the causes of the crisis are between a typical monetary perspective and a vision of the crisis **as coming from exhaustion, in the long term, of the growth regime (therefore of real factors)**⁹.

According to R. Boyer, these diagnoses come from a variety of variables on one hand (real, monetary, institutional) and those of temporal levels (short, medium and long-term). Table 1 summarizes possible interpretations.

³ Jean-Marie Bouissou, 2000, « L'économie politique de dix ans de crise », *Economie internationale*, no. 84, p. 186 ; See aussi M. Bertoldi, 2003, « Chronique d'une décennie de politique économique : l'exemplarité du Japon », *L'Année de la régulation : Economie, institution, pouvoirs*, no. 6.

⁴ Mareno Bertoldi, 2003, *op. cit.*

⁵ R. Mikitani and A. S. Posen (eds.), 2000, *Japan's financial crisis and its parallels to U. S. experience*.

⁶ See R. Boyer et Yamada, 2000.

⁷ R. Boyer, 2004, « Le Japon : de la décennie perdue à un improbable New Deal », CEPREMAP, working paper, no. 2004-04, p. 5

⁸ *Ibid.*, p. 5

⁹ R. Boyer, 2004, *op. cit.*, p. 6

Table 1: A typology of the interpretations of the origin of crisis¹⁰

	Real	Monetary	Institutional
Short term	Insufficient demand; Error of fiscal and budgetary policies	Errors by the BOJ in the management of interest rates	Excessive belief in the effectiveness of the former economic policy
Medium term	lack of new products feeding growth; Negative impact of uncertainty	Inability to solve the debt crisis and irrecoverable debt	Tensions in the institutional architecture needed for a “catch-up” period
Long term	Exhaustion of the post-war growth regime	Ineffectiveness of the banking and financial systems	Adjustment in the mode of regulation to the national and international context

This paper begins with the hypothesis of the existence of a systemic crisis. Does this mean “hypothesis of systemic crisis”? We consider “systemic crisis” to come from the “rupture of coherence” of institutional elements constituting the postwar Japanese development model. The loss of the coherence of a growth regime which implies evolution of [heterogeneous local temporalities](#), is the main reason for the crisis. A crisis is defined as "systemic", two analytical orientations are necessary: (i) the institutional dimension must be taken into account and (ii) medium or long term temporal levels of analysis.

Our work is an application of the Minskian theory of financial fragilization as applied to the Japanese crisis of the 1990s. Our working hypothesis is as follows: the speculative behaviour of the major economic agents and the fragilization of the financial structure can be explained by the combined effects of endogenous evolution of the Japanese economy (rapid growth) and the financial liberalization of recent years. The financial crisis was transformed into a systemic one, and finance-led growth regime which has emerged in the Japanese economy.

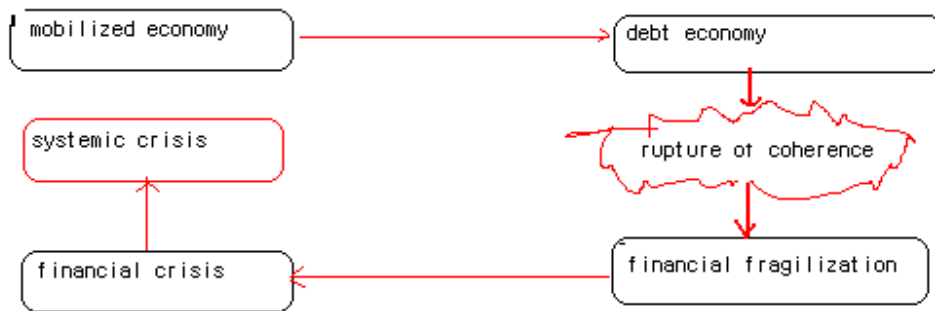
The mobilized economy and debt economy

A mobilized economy has the tendencies of a debt economy. Conditioned by particular forms of competition, constant or increasing returns characterize the firms in priority sectors; the behavior of these firms move toward maximising the output volume and/or domination of the market. Being 'liberated' from the power of ownership and therefore from goal of maximisation of short-term profits, firms tend to increase fixed capital investment; and the uncertainty of supply or the lack of the markets for ' inputs ' lead to the horizontal diversification of firms. These microeconomic tendencies are translated, on the financial level, into the debt of firms and/or the state. The mobilized economy leads therefore to a debt economy (*overdraft economy*).

¹⁰ *ibid.*, p. 6

This means that a crisis in a mobilized economy takes the form of a crisis of over borrowing. From this point of view, the post-war Japanese crisis can be seen as an economic crisis according to the following schema (figure 2):

Figure 2: Mobilized economy and debt economy

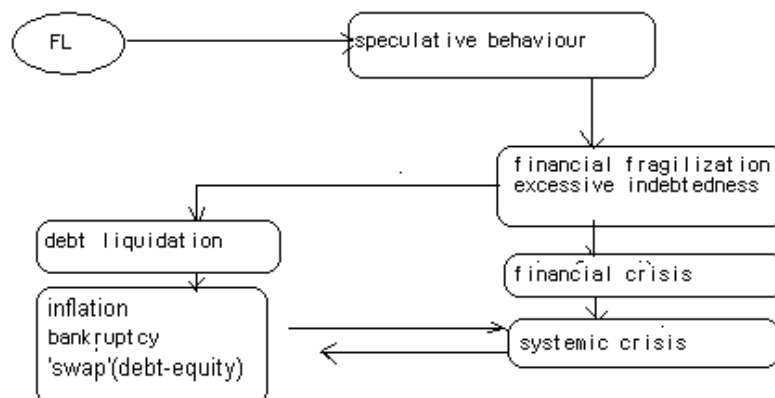


In spite of the tendency towards debt, the system of the mobilized economy maintains a certain stability in regulation mode (normal in an environment of accumulation; therefore in economic performance). It is these complementary factors and institutional coherence that allow for this stability. In other words, despite the high financial leverage of firms and/or the state, local disturbances were not transformed into a **general disturbance; the mode of regulation worked**.

So how do we explain a systemic crisis? Our institutional hypothesis is that there was a **rupture this complementarity, therefore in the coherence of ensemble of institutions**. We feel that financial liberalization (FL) makes up this rupture of coherence. FL, as a consequence of the **conjunction of endogenous evolution** on the one hand and external conflict on the other, significantly changed the functioning of the Japanese economic system. Naturally, FL is not an isolated event; but part of the general processes of liberalization of the Japanese economy. But given the strategic role of the Monetary and Financial System (MSF) in economic mobilization, FL can be considered a turning point leading to a **rupture of coherence**. As shown in the following section, we consider this sequence to be Minskian *modus operandi* applied to the crisis of a mobilized economy.

How does this *modus operandi* work? This paper calls the internal structure of sequence as a '*model sequence*' (figure 3): FL pushes main actors into speculative behaviour; which causes financial fragilization leading to a financial crisis; the form of debt liquidation can take several forms: inflation, bankruptcy or '*swaps*'.

Figure 3: The *modus operandi* of the debt crisis



The debt structure is an important variable of the process of a crisis. Variants of economic mobilization lead to different structures of debt. The form of debt liquidation are differentiated by the type of economic mobilization, which is translated by the relative weight of the inflation, the bankruptcy and swap (privatization or *debt-equity swap*).

In what sense does the Minskian theory of financial fragilization provide us the analytical tools in looking at a crisis in a mobilized economy, in particular the Japanese financial mobilization?

In section 1, we present the Minskian theory of financial fragilization. In section 2, major phases of Japanese FL are analysed and the mechanism by which speculative behaviour leads to the financial weakness is explained. In the section 3, some principal characteristics of emerging growth regimes are presented.

1. The Minskian debt crisis

1-1. The Minskian financial fragilization

Different concepts of the firm have implications for the business cycle since they imply different firm behaviors, especially investment behavior. Standard neoclassical investment theory is based on three central concepts: (i) confusion between owners and managers, (ii) informational hypothesis (perfect and complete information) and (iii) reversibility of the fixed capital investment¹¹. The firm's objective is consistent with that of ownership (stockholders) and maximisation of the firm's market value as the objective is not only legitimate but analytically appropriate.

However, if the firm is 'autonomous', stockholders and management have objectives, constraints, different time horizons or liquidity preferences between them¹². As J. Crotty points out that,

“the semi autonomy causes the problem of indecision as regards to the firm's objective function, its constraints or the cost of capital. »

This causes two problems. On one hand, a theory which begins with the three neoclassical central hypotheses is inapplicable for the analysis of a firm's behavior in a more realistic setting. Since,

« If firms are partly independent or semiautonomous from their owners and can make investment decisions that run counter to shareholders' perceived interests, there is no wealth holder control of, or 'sovereignty' over, the capital accumulation process and no mechanism to assure optimal coordination between the real and financial sectors of the economy. »¹³

On the other hand, it is necessary to specify conditions for determining the form of the firm's objective. The mobilized economy set up institutionally is the precondition determining the firm's objective function. In this institutional set-up, the firm has a tendency to maximize output volume. The dynamics of the economic system thus formed differs from that of the neoclassical type.

Theoretically, it is a question of constructing a investment function on the basis of an alternative hypotheses. Instead of the three main hypotheses of neoclassical theory, we consider, as Crotty proposes, that

“the hypotheses of illiquid capital, semi-autonomous firms (in relation to the the owners) and Keynesian uncertainty are necessary to construct a realistic

¹¹ J. Crotty, 1992, “Neoclassical and Keynesian approaches to the theory of investment”, *Journal of Post Keynesian Economics*, 14(4).

¹² J. Crotty, 1990, “Owner-manager conflict and financial theories of investment instability : a critical assessment of Keynes, Tobin, and Minsky”, *Journal of Post Keynesian Economics*, 12 (4), p. 535

¹³ J. Crotty, 1992, op. cit., p. 484-485

investment theory »¹⁴

In a world with the irreversibility of investments (illiquidity of capital) and future uncertainty, the attitude towards liquidity has some important real effects. In fact, it concerns critics of the neutrality of money. According to Hahn, the neutrality of money is an axiom according to which

*“the objectives of agents that determine their actions and plans do not depend on any nominal magnitudes. Agents care only about ‘real’ things such as goods... leisure and efforts.”*¹⁵

Therefore, the neutrality of money assumes that the real thing exists as such without the intervention of the nominal. The criticism of the neutrality of money then is dismissed by the critic of this comprehension of reality. In the alternative view, our economic world does not exist in such a way that *nominal magnitudes* is only its *veil*. The economic world does not exist without this nominal world.

Let's turn to the Minskian model of the investment. What are the alternative hypotheses relative to investment? In his theory of investment, three factors play a critical role: i) the price of capital assets, ii) the price of current products and iii) the conditions of the financial market which affect the use of the external financing (institutional conditions and business climate). Investment decisions are made according anticipation of the marginal efficiency of capital (MEC) and long-term interest rates, taking into account the borrower's and entrepreneur's risk (or risk of **illiquidity** and/or **insolvency**). So, the investment decision depends not only on 'industrial ' factors but also on 'financial ' ones.

In the Minskian model, all markets are divided into two categories: one in which prices are determined by the necessity to recuperate costs (incurred by past actions) and the other in which prices are determined by the value assigned to future incomes. In fact, the first is the market for current products with the last being the asset market, financiers or not¹⁶. The important point is that, in the Minskian model, the determinants of these two price groups are different. Notably,

*“the prices of various assets depend not only on the state of confidence but also on the volume of the money supply, since quantities and prices of assets are inversely related. Moreover, this volume is a function of bankers' expectations of firms' profitability, these expectations providing the basis of an investment supply price.”*¹⁷

So, the relative independence of the determinants of these two price groups is an important explicative variable of the investment and macroeconomic dynamics. This relative independence is a macroeconomic translation of the hypothesis of the semi

¹⁴ Ibid., p. 491.

¹⁵ Cited from Paul Davidson, 1996, "What are the essential elements of post Keynesian monetary theory?", in Ghislain Deleplace and Edward Nell (eds.), *Money in motion*, p. 49

¹⁶ *ibid.*, p. 361; according to Minsky, the CPI and the index of Dow Jones represent the two prices.

¹⁷ H. Minsky, 1975

autonomy of management in relation to ownership. Variables such as the capacity of self-financing, borrower and lender risks and the level of anticipation are introduced into the investment function. In the investment behavior of the Minskian firm, the financial structure and anticipation play a predominant role.

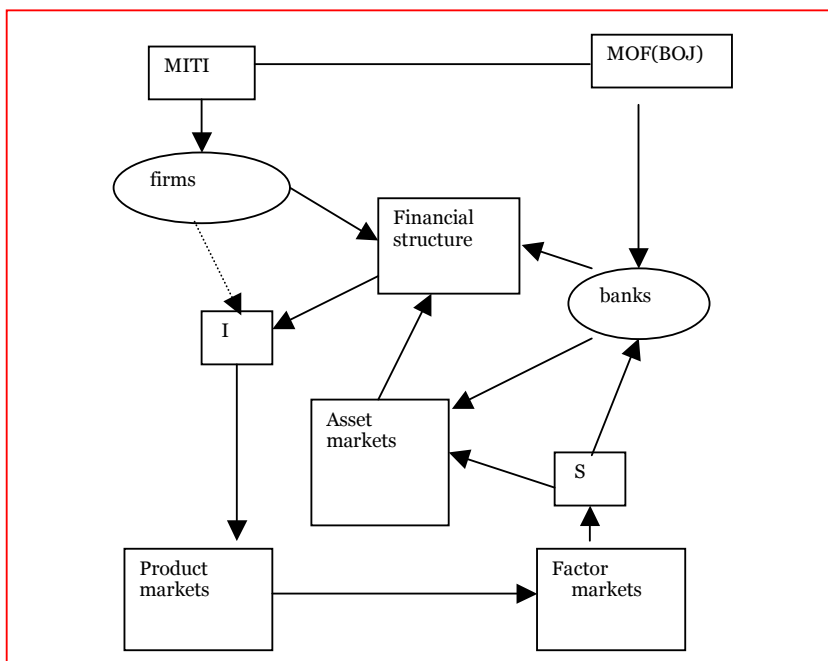
If we define the financial structure as the ‘structure of financial assets and obligations and networks of commitment of payment between units’, how does it evolve and how does it influence economic dynamics? As much as economic mobilization leads to a debt economy, the leverage ratio is a very important element of the financial structure of this type of economy. How is the rate determined?

In a world with semi-autonomy of the owners and the managers, the leverage ratio appears as a practical answer to the contradictory tendencies which cross the firm as a technological unit on the one hand and a commercial unit on the other. In a world of uncertainty, the determination of the firm’s leverage ratio is a mechanism of risk distribution between economic agents. Investment and its bank financing imply a certain belief on both sides, which depends on the history of their relations and the anticipation of future relationships. From this point of view, not only direct relations between firms and banks, but also the attitude of monetary authorities influence the risk distribution and the determination of the leverage ratio, as much as this conditions the level of borrower and lender risk.

As we wrote, economic mobilization (administrative or financial) accompanies banking regulations, which is translated into a high leverage ratio. The high level corresponds to a mechanism of risk distribution among economic agents as much as the effects of the monetary circulation contribute to the overall economy. The institutional set-up of economic mobilization and debt economy assumes a compromise (or a general consensus) in the matter of risk distribution, this risk due to the fixed nature of productive assets and future uncertainty.

The financial structure of entire economy, and particularly that of the sector of the IBG complex, is affected by relations between the firm and commercial banks and the economic policy of the state by changing relations between firms and banks, influences the financial structure (left high in the figure 4); besides, the liquidity preference of the economy, irreducible to the policy of the State, influences financial structure (left low in the figure 4).

Figure 4: The mechanism of risk distribution of investment in a mobilized economy



Notes: MOF, ministry of finance; BOJ, Bank of Japan; I: investment; S: savings

1-2. The mechanism of Minskian financial business cycle

Therefore, to explain a financial crisis in an endogenous manner through the Minskian model, it is necessary to explain the process by which the financial structure weakens during economic growth. From this Minskian perspective, the key of the mechanism of financial fragilization during the course of long wave (*long swing*) consists in the cumulative changes of financial variables during expansion and contraction phases. During expansion, systematic changes are made in the financial structure in such a manner that the asset prices increase with anticipation which allows more debt. As Minsky underlines, the precise nature of these changes depends on institutional conditions which evolve under the market pressure and influence of administrative decisions.

Changes in the financial structures during this rise consist of the following: (a) the increase in debt related to the incomes in *income producing sectors*, (b) the increase in asset prices (financier and real estate), and (c) the decrease in relative liquidity. According to H. Minsky,

*«During a long-wave expansion each of these elements of the financial environment changes in such a manner as to increase the probability of a panic taking place; balance-sheet payments increase relative to income receipts, asset prices are bid up, and income and other financial assets grow faster than ultimate liquidity.»*¹⁸

The fragilization of the financial structure is not an exogenous or hazardous affair; it is

¹⁸ Ibid, p. 334

endogenous in the economic system with well-developed financial markets.

Another aspect of this process is evolution of the anticipation of the financial community, in this case, bankers. The evolution of the financial structure accompanies a concomitant evolution of the subjective anticipation of the business world. In other words, this evolution supposes a mechanism of anticipation formation of the economic agents.

« The bank's estimate of the expected cash flows as well as its state of confidence in those cash flows will be influenced by conventional wisdom at any given time concerning the profitability of certain types of loans, such as those financing commercial real estate, the energy industry, and takeovers and leveraged buyouts. These variables will be influenced as well by a general feeling of optimism or pessimism concerning the future. As Minsky has pointed out, the general attitudes of bankers along these lines are likely to change systemically over the course of the business-cycle expansion, changing from highly optimistic in the boom stage of the expansion to more pessimistic as the expansion comes to an end. »¹⁹

In the Minskian model, there is an endogenous mechanism which leads to the fragilisation of the financial structure; this also corresponds to the anticipation. Even if the economic boom feeds the optimism amplifying the boom (a cumulative causation), the financial fragilization, the denouement of which is a financial crisis on a large scale, is conditioned by events which increase anticipations of the agents. Let's turn to the explanation of a more precise mechanism of this cumulative causation and of the events.

H. Minsky and Ch. Kindleberg refer to *displacements* as the events which radically change the opinions of the financial community. These events must be sufficiently wide and important enough to modify the opinions of the financial community and to change the opportunities for profit for at least important sectors of the economy²⁰. When these conditions are fulfilled, the economic boom starts. With displacement, a kind of '*positive feedback*' works. Prices increase, which gives new opportunities for profit which then induces more investors. As investment increases income, this last factor continues to stimulate additional investment. Euphoric anticipation makes it easier to finance economic activities. Particularly, firms' financing structure depends more and more on the capacity of '*money making*' of the firms considered as '*going concerns*' (*Goodwill*). As Th. Veblen explains, anticipation and macroeconomic dynamics reinforce each other. So,

“through the self-reinforcing interaction between rising stock prices and the value of the corporate balance sheet, the modern firm is able to leverage positive expectation of future earning capacity into present-day market power-providing the source of credit necessary to reorganise the ownership

¹⁹ Wolfson, 1996, p. 462; see also A. Orléan, 1999, *Le pouvoir de la finance*, for the explication of the conventional determination of the assets prices.

²⁰ Charles P. Kindleberger, 1978, *Manias, Panics, and Crashes : A history of financial crises*, Basic Books, Inc., Publishers, New York, p. 15-16

structure of industry."²¹

The crucial point of process is in the cumulative sequence of the euphoric anticipation by agents, of weak preference for liquidity, therefore the abundance of financial resources and investment opportunity to where the behaviors of the agents create irrationality, as the word 'mania' suggests²². Once the excessive nature of the *boom (upswing)* is perceived, the financial system feels a kind of *distress*, which reverses the rise to where behaviors then resemble 'panic'.

*« In the mania phase, people of wealth or credit switch out of money or borrow to buy real or illiquid financial assets. In panic, the reverse movement takes place, from real or financial assets to money, or repayment of debt, with a crash in the prices of commodities, houses, buildings, land, stocks, bonds – in short, in whatever has been the subject of the mania. »*²³

So a period of financial distress begins. The demand for money increases while liquidity decreases, leading to a rapid rise of interest rates, the trade deficit, bankruptcies and the collapse of asset prices which had been the object of speculation. This time a '*positive feedback*' mechanism works in reverse. The fall in prices diminishes the value of the collateral of firms and households with debt; banks refuse to lend money and firms and trading companies sell their goods while households sell their financial assets, which accelerates the fall in prices and the value of the collateral, and so on.

According to H. Minsky and Ch. Kindleberger, the financial fragilization explained as a consequence of the endogenous growth of the economy endowed with a developed financial system. If the sustained growth in the medium-long term requires a 'passive' monetary and financial system²⁴, the financial fragilization is a potential risk inherent in the monetary production economy. In other words, if growth accompanies structural changes in the broad sense and therefore future uncertainty, there is a *Trade-off* between self-sustained medium to long-term growth and overly rigid monetary stability. This is because without a certain amount of euphoria concerning the future, therefore without the supply of 'speculative' money, self-sustained growth is no longer possible, without assuming a level of certainty.

The crucial point of this entire process is in the formation of agents' anticipation, **thus in the subjective dimension**. But if institutions condition the formation of anticipation, they must also be an object of the analysis of financial crisis. In fact, major financial crises not only have a generality, presented by the model of Minsky and Kindleberger, but have also particularities which differentiate them from each other. Incorporation of the institutional dimension in the analysis of a crisis is then equivalent to

²¹ Eric R. Hake, "The appearance of impairment: Veblen and Goodwill-financed merger", *JEI*, 38 (2), 2004, p. 394

²² As written by Kindleberg, the two words describe such a situation, 'mania and bubble'. The mania underlines the irrationality of behaviour and the bubble suggests the eventual bursting.

²³ Charles P. Kindleberger, *Manias, Panics, and Crashes : A history of financial crises*, Basic Books, Inc., Publishers, New York, 1978, p. 5

²⁴ N. Kaldor,

the introduction of historical particularities of the crisis. The question of historical particularities of the crisis leads us to the question of causal relationship between the mobilized economy and the form of the financial crisis.

1-3. Moral hazard or rupture of coherence?

Like other economic crises, the Japanese crisis has historical particularities irreducible to the generality of the Minskian process of financial fragilization. The historical particularities of this economic model can be analyzed in terms of financial mobilization. A major institutional change happened in the course of economic development, which is the autonomy of firms: the autonomy of the IBG complex not only in relation to political authorities, but in relation to banks (financial autonomy).

What is link between these changes and financial crises? But what is still missing in the Minskian explanation is the displacement of the cumulative movement mentioned above. What constitutes this displacement? This is a question of finding microeconomic foundations in speculative behavior. In this regard, two explanations would be possible: one related to moral hazard and the other to a rupture of coherence.

In the explanation through the moral hazard, the causal sequence is as follows: given imperfect information, notably asymmetrical information, the risk of moral hazard is high; institutional deficiencies of the governing structure of the banks and/or firms lead to speculative behavior, which explains the formation of financial and land bubbles. Given the opportunism of economic agents and asymmetric information structure between the principal (banks or stockholders) and agent (managers), the institutional reform which reinforces the governing structure, notably the market discipline, constitutes the principal anti-crisis measure.

This approach assumes that agents are endowed with a proper motivation structure. But the relationship between banks and clients (the industrial firms and monetary authority) are institutionalized, formally or informally, in the form of personal relations, customs, practices, etc. They are far from the relations of a pure market ('*Arm 's length relation*'). The explanation in terms of a moral hazard refers to the type of economy which assumes a specific institutional set-up, i.e., the model of pure and perfect competition. If rapid growth of the post-war Japanese economy was accompanied by a high level of debt, the last is considered an obstacle **in spite of** which Japanese economy realized its performance thanks to other factors, such as a proper government economic policy or firm competences. If we consider this explanation as insufficient, it is because it separates favorable and unfavorable conditions for growth, conceived in the reference model of pure and perfect competition and because it considers the unfavorable conditions to be pure obstacles. In other words, both aspects do not form a consistent view of the whole economic system, considered as an ensemble of rules, routines and practices. From it comes inconsistencies between the analysis of the successes and that of the crises of the Japanese economy; inconsistency in that the same element play opposing roles according to their economic conjuncture. As R. Boyer and T. Yamada criticize,

« whereas during the 1980s, the vast majority of authors were praising the coherence and dynamic efficiency of Japanese institutions and organisations, the 1990s have experienced a complete and brusque U-turn. Any feature that was perceived as a trump card for Japan is then portrayed as clear evidence of archaism, irrationality and inadequacy for the new trends of the world economy. »²⁵

In our hypothesis, the economic system of mobilization has a tendency towards a debt economy. The high level of debt is an integral part of the process of Japanese growth. Therefore, it is necessary to explain at the same time, the role played by debt in rapid economic growth and its role in the financial crisis. It leads us to the hypothesis of a rupture of coherence. In other words, as explained in the Minskian model, endogenous evolution and *displacement* explain the process of financial fragilization. In this explicative model, Financial Liberalization marks a rupture of institutional coherence, which leads to financial fragilization.

In this respect, we can distinguish two different but supplementary approaches: the search for microeconomic foundations in the dysfunctional banks (Geoffron and Plihon (1998); Miotti, among others) and the institutional explanation of financial fragilization (theory of regulation). As shown in table 1, there is a difference in nuance between these approaches, but they are supplementary when explaining financial crises in a consistent manner.

Table 2: The microeconomic foundation of financial fragilization

	Microeconomic foundations of the dysfunctional banks	Institutional explanation of the financial fragilization
Authors	Geoffron and Plihon (1998) ; Miotti and Geoffron (2001)	Boyer (2000, 2004 (a)) ; Nabeshima (1997, 2000)
Focus of the analysis	Banks are at the centre of the crisis process	Institutions which mediate different actors
Principal mechanism of the FF	Moral hazard resulting from the changes in the environment created by the FJ -> speculative behaviours of the banks	Financial mode of regulation -> FL-> loss of institutional complement
Exiting from the crisis	Reinforced prudent control	New mode of regulation

As much as SMF is a key element of financial mobilization, demobilization leads inevitably to changes in SMF. In what direction and in which process mode of change did it take place? We shall indicate Financial Liberalization (FL), or all measures adopted by the main actors, especially notably by monetary and financial authorities. Certainly, the monetary authority is a key actor and the measures it takes are conditioned by the actions of other actors. But in monetary and financial systems, the monetary authority occupies a unique position compared to other actors, which allows us to speak of "options" and "measures", and therefore, of the possibility of "choices".

²⁵ Boyer and Yamada, 2000, p. 3.

How then do we explain the process of financial fragilization of the Japanese economy in an endogenous manner? And what are the major characteristics of an emerging growth regime after a systemic crisis?

2. The rupture of coherence and speculative behavior in the Japanese economy

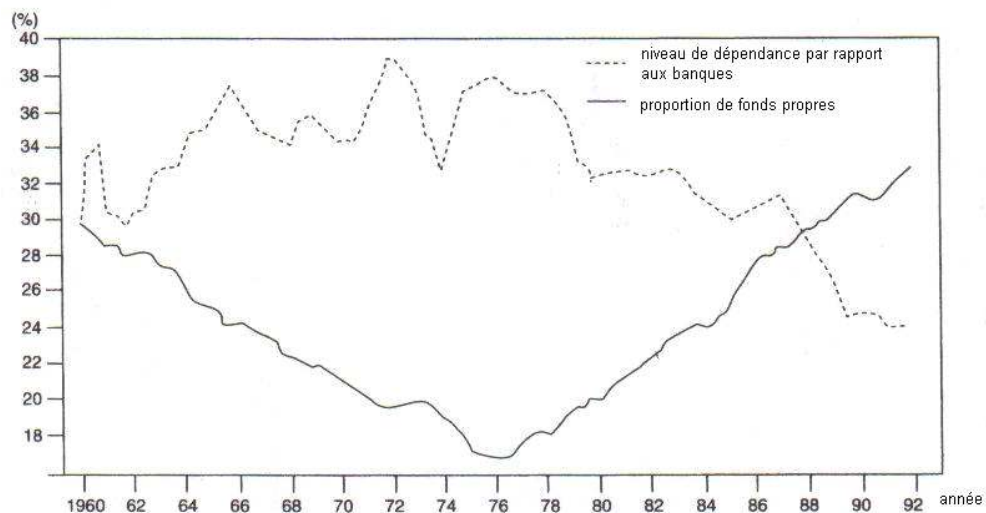
2-1. Main phases of financial liberalization

During the 1970s, the regulations of the financial system of the postwar period progressively became **softer** in other OECD countries. Japan joined this movement, but the process of deregulation in Japan experienced a real acceleration only from 1984.

From where do the impulsions of FL come? We look at three main reasons: (i) the financial autonomy of large companies in relation to banks and the weakening of the main bank system, (ii) government obligations following the increased public deficit, and (iii) the movement of the financial globalization and the external pressure which resulted from it. In a sense, the rapid growth of the Japanese economy led to FL.

Firstly, large companies, notably the IBG complex, became more independent of banks in their financing. Until the 1980s, large Japanese companies, notably the IBG complex, were consolidated as autonomous, and realitively stable actors. This development allowed large companies to find a wider range of funding sources than before. All at once, the introduction of active financial management caused them to diversify funding sources and to lower their bank debt. The capital ratio of big companies, which fell until the mid-1970s, began to increase (figure 5) after this moment.

Figure 5: **The financial structure of Japanese industries.**



Source: Taken from H. Yoshikawa (dir) ., on 1998, *Made in Japan*, p. 355.

The analysis of the evolution of the financing structure of major firms also shows a turn in the mid-1970s (table 3). Since that time, the weight of internal funds increased rapidly. The weight of borrowing diminishes and funding by issuing equities increases. This means that the financial system's reliance on banks (at least for large companies) has arrived at a turning point. This financial autonomy, which translates into the accumulation of internal funds and diversification of funding sources, encourages the dissolution of the main banking system, not only as a mechanism of financing but also as a governance mechanism for large firms.

Table 3: The financing structure of the major Japanese firms (with more than 1 billion yen)

Years	Internal funds	Borrowings	Short-term borrowings	Long-term borrowings	Bonds	Capital increase	Trade payables
1960-64	22.9	33.8	20.3	13.4	6.8	10.8	16.2
1965-69	37.5	36.9	17.2	19.7	5.2	3.8	22.7
1970-74	35.4	41.6	19.3	22.4	5.1	3.2	21.9
1975-79	45.8	26.5	16.9	9.6	10.6	8.0	17.7
1980-84	55.3	16.4	9.9	6.5	8.5	10.4	9.6
1985-89	45.2	6.4	5.3	1.1	17.4	15.8	5.0
1990-94	87.3	5.2	-2.8	8.0	11.1	4.6	-7.1

Source: Shhimizu and Horiuchi (1997); cited by Naoki Nabeshima, 2000, « The financial mode of regulation in Japan and its demise », p. 114.

Secondly, the role of the State in the investment financing diminished quickly. The amount of government financing for industrial investment diminished from 28.3 % at the beginning of the 1950s to 13 % in the mid-1970s. All at once, the power of the State in the rationing of credit dispersed to numerous private sector actors. In fact, this '*decentralization*' (*devolution*) reveals that this general change happened in the power relationship between the State and private firms, so that private sector autonomy increased with rapid economic growth.

Another source of FL is the appearance of new macroeconomic and financial conditions on both national and international levels. On the domestic side, the slowing of [tendential](#) growth rate caused a fundamental modification of the financial positions of household, firms, banks, and the public sector. Notably, the disequilibrium of the public account and the issuance of 'deficit obligations' from 1975 began changes in the functioning of the Japanese capital markets. The disequilibrium of the public account caused by the oil crisis and increase in social expenditure, obliged the government issue of 'deficit obligations' from 1975 and [to search for a more liquidity of government obligation markets](#) and made progressively easier access to banks by the secondary market. The issuance of government obligations increased from 4 000 billion yen in 1970 to 70 000 billion yen in 1980²⁶. The massive issuance of debt (obligations) produced the

²⁶ Geoffron and Rubinstein, 1996, p. 50

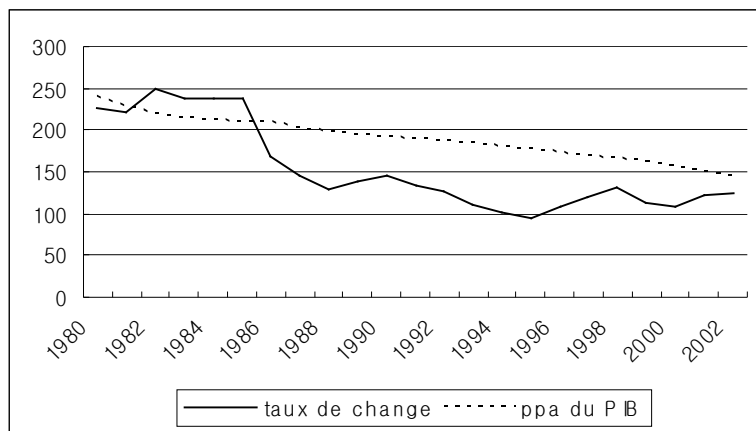
necessary pressure to deregulate creditor interest rates.

The third source of FL is pressure from the outside world. As much as the trade surplus accumulated, particularly with the United States, the government must have loosened restrictions on capital outflows to restrict the appreciation of the yen. Trading partners, particularly the United States, increased pressure so that Japan could liberalize its domestic financial market.

The law of exchange rate control, adopted in 1947, was modified in 1980; in 1986 the 'Japan Offshore Market' was opened (reserved for non-resident loans and savings); the Japanese institutions consequently had the right to complete foreign exchange transactions which were not directly related with trade flows, which was a sign of their autonomy in international financial operations related to 'real' exchanges of goods and services. The Baker-Takeshita Accord of 1984 on foreign exchange between Japan and the United States gave foreign financial institutions broader access to the Japanese market and savings. So, 22 foreign financial institutions became members of the Tokyo Stock Market between 1985 and 1987²⁷.

Therefore, FL constitutes a rupture in the functioning conditions of the Japanese post-war economy. The decline of the yen-dollar exchange rate around 1985 (*Plaza Accord*) shows the importance of the rupture (figure 6)

Figure 6: The decline of the yen-dollar exchange rate



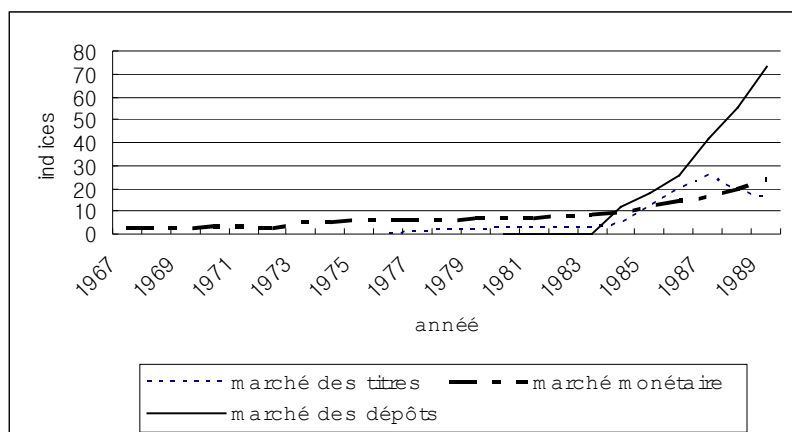
Data source: OECD, 2004, *National accounts of OECD countries, hand aggregates*.

The deregulation index confirms the importance of this institutional rupture in the financial system (figure 7)²⁸.

Figure 7: The deregulation index of the Japanese financial markets

²⁷ Nabeshima, 1997, p. 54

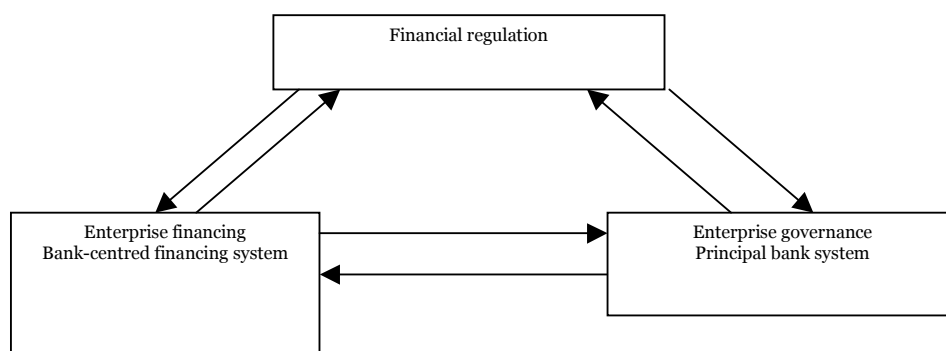
²⁸ For the more detailed chronology of the FL, see H. Kitagawa et Y. Kurosawa, « Japan : development and structural change of the Banking system », in H. Patrick and Yung Chul Park(eds.), *The financial development of Japan, Korea, and Taiwan*, 1994, pp. 125- 128; P. Geoffron and R. Rubinstein, 1996, *La crise financière du modèle japonais*, p. 53



notes: security markets: ratio of fiscal year's volume of transaction to outstanding balance of government bonds at fiscal year-end ; money markets: calendar year-end ratio of money market assets to GNP; deposit market: unregulated interest rate deposits as a percentage of total time deposits at zenkoku ginko (usually translated as 'all banks') at fiscal year end source: Juro Teranishi : « Japan : development and structural change of the financial system », 1994 , p. 50

So FL is not an isolated event, but a part of the wider process of structural and institutional change which accompanies the growth of the Japanese economy. These changes also mark the end of the adherence of the Japanese financial institutions to the institutional set-up of the postwar period. Commercial banks claimed reforms in the fixing of the interest rates and demanded access to other parts of the financial markets, especially in the trading of securities. The regulation, which had protected them before is now considered to be obstacle to their development. Therefore, the firms' demand for credit fell and household savings left the banking system. So these conditions encouraged banks to claim deregulation of the financial markets so that they could gain access to new segments of domestic and foreign markets. In a word, the success of financial mobilization made obsolete the mode of financial regulation.

Figure 8: The institutional coherence of the financial system of the postwar period (N. Nabeshima, in 1997)



In institutional plans, FL means a rupture of coherence in the financial regulation mode which has supported postwar Japanese growth. As figure 8 illustrates, in the

postwar Japanese economy, financial regulation²⁹, the system of financing and enterprise governance by the main bank was made up of a consistent ensemble, so that activities of the concerned agents led to the strengthening and reproduction of the same institutional set-up. In other words, all institutions constituting the financial regulation mode work as a mechanism of convergence of local activities. However, FL removed this coherence; the capacity of the financial regulation mode to support the accumulation regime became weaker. All institutions, both inherited and newly introduced, work rather as a mechanism of divergence of local activities, one consequence of which was speculative behavior and financial fragilization.

2-2. Speculative behaviors and financial fragilization (FF).

(A) The '*model sequence*' of FF

What is the mechanism by which the rupture of coherence leads to the Minskian financial fragilization? What is the '*model sequence*' which links sequences of activities of the heterogeneous agents leading to the fragilization of the financial structure?

As we have just pointed it out, with the consolidation of large enterprises (notably the IBG complex) not only as a technological unit, but as an autonomous financial unit related to the banks, commercial banks had to find new customers. Facing a decline in credit demand by large enterprises, big banks searched for new customers in different market segments which were up to now inaccessible because of regulation. The new segments are credit for SMEs, real estate and construction firms, both of which are riskier in comparison to their traditional customers. The big banks channeled their credit through non-bank financial institutions (for examples, *housing-loan companies* and *consumer credit firms*), as they were less regulated than banks themselves.

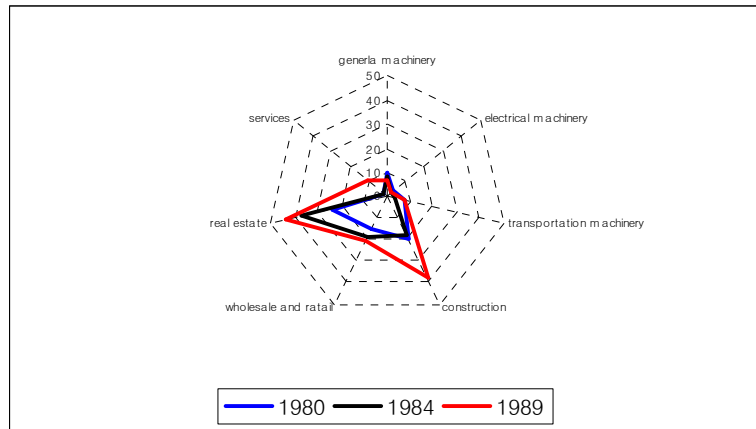
The relative weight of this group of borrowers increases to one-third of the total bank credit. Also, borrowing which has been channeled in this way (from big banks to the non-banking institutions) rises to 37.8 % of the total borrowing in the property industry (real estate)³⁰. The investment ratios in real estate (% of the property investment of the total investments) increased (figure 9) in all sectors during the 1980s. These data imply the increase of anticipated profits in non-manufacturing activities such as the construction of business offices, golf courses and other resort installations. While manufacturing industries used about 70 % of their land for the construction of their plants and warehouses, the services industries, general trading company and property industries used 23.5 % of their land for the construction of golf courses, 32.0 % for campgrounds, and 31.6 % for the construction of ski resorts. According to Yoshikawa, more than half of all bank credit was allocated to investment in real estate during the bubble period (1986-1989)³¹.

²⁹ In particular, the policy of interest rate cum the convoy system

³⁰ Ozawa, 1999, p. 356

³¹ *ibid.*, p. 59

Figure 9: The ratio of property investment by sector (percentage of the property investment of the total investment)



Data source: H. Yoshikawa, on 2002, p. 64.

If we compare the land boom of 1986-1989 with preceding boom (1972-73), the contrast is remarkable. Loans to the manufacturing industry remained at a high level from 1972 until 1973. On the other hand, the contribution of the manufacturing industry turned negative in 1986 and remained so, which means that the banking sector did not play the intermediary's role in chaneling monetary savings to the manufacturing industry.

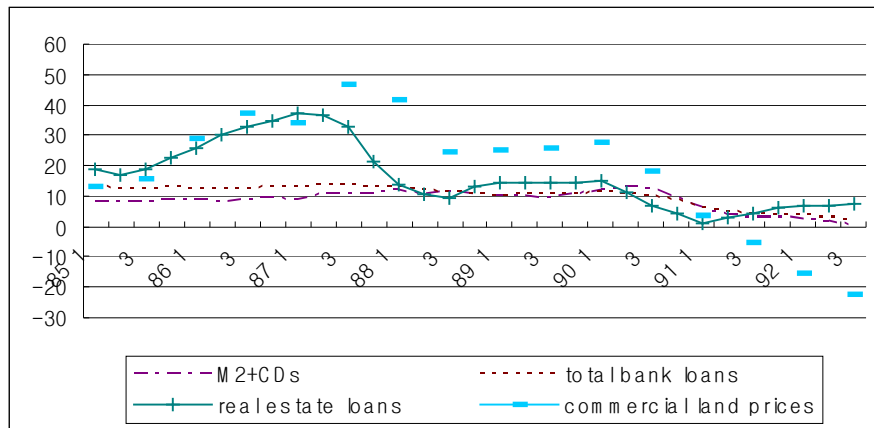
Banks and firms continued a strategy founded on credit promotion even in a new institutional environment of financial liberalization. The increase in the price of financial and land assets reinforced this strategy. Particularly, the collateral in the form of land assets played an important role. Besides, in the Japanese economy, after the war, land prices increased without interruption (except for 1974) and this uninterrupted increase in land prices created the 'myth of the land' according to which the investment in land assets is the best investment possible. The increase in real estate prices also increased the borrowing capacity and additional credit, which in turn fed the increase in real estate prices (table 4 and figure 10). Euphoric anticipation and investment-led growth reinforced each other, with the increase in land prices and financial assets acting as a powerful amplification mechanism.

Table 4: distribution of outstanding loans of all banks by type of collateral (%)

Mar. 31	Real estates	securities	other	Third-party	unsecured	Total loans(billions yen)
1980	28.5	1.8	9.0	27.0	33.6	114,469
1982	25.7	1.6	9.0	26.4	37.2	145,540
1983	24.2	1.5	8.9	26.5	38.8	164,010
1984	22.8	1.7	8.8	27.1	39.7	185,519
1985	21.8	1.8	8.3	26.6	41.4	215,771
1986	21.7	2.0	9.6	26.3	40.4	240,093
1987	22.1	2.2	9.9	26.0	39.9	280,169
1988	23.2	2.4	9.4	25.6	39.4	320,414
1989	23.9	2.6	9.2	26.8	37.6	364,822
1990	24.6	2.9	9.0	27.2	36.2	420,625
1991	27.2	2.3	8.6	29.9	31.9	514,422

H. Kitagawa et Y. Kurosawa, 1994, « Japan: development and structural change of the banking system », p. 108; data source, Bank of Japan, Economic statistics Annual.

Figure 10: The monetary indicators and land prices (annual growth rate, in %)

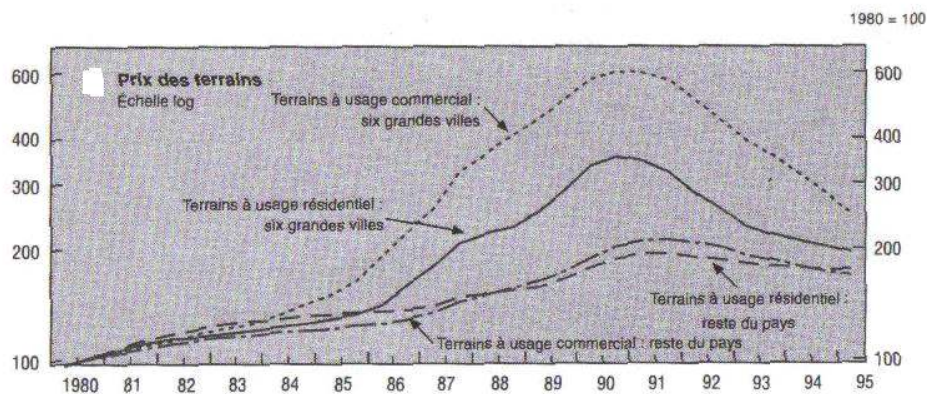


Source: H. Yoshikawa, on 2002, p. 62-63

The policy of the government also contributed to the formation of euphoric anticipation regarding land prices. The 'Fourth Comprehensive National Development Plan' (adopted in 1989) contained a vast development plan of Tokyo which contradicted the policy of restriction of population concentration and the promotion of residential zones in the country regions. The government introduced vast development plans of Tokyo, developments of *inner City regions* and offered incentives and preferential measures in other urban development plans.

As figure 11 shows, the price indices of land assets, and that of the stock exchange, **flew off**. Drawn by this euphoric anticipation, the growth rate in investment increased rapidly. The average growth of 5 % during the period of 1986-1989, was attributed to this euphoric anticipation.

Figure 11: The price indexes of real estate.



Source: OECD, 1995, *Economic researches of the OECD, Japan*, p. 56

(B) From financial fragilization to financial crisis

The rise of real estate prices translated into a majority of these assets in Japanese national wealth so that, from 1986, their value was equivalent to the three-quarters of the total national wealth, among which 58.7 % was for the land³². Financial and land national heritage represented the fourteen times GDP in 1987 compared to four times in 1955³³.

Several indicators prove the fragilization of the financial structure. As much as the rise in value of patrimonial assets was fed by the quicker rhythm of the credit expansion than production, the credit / GDP ratio rose quickly. The debt of Japanese households in comparison with the GDP rose from 47 % in 1985 to 63 % in 1990, and the debt by firms, 89 % in 1980, to 127 % in 1985, then to 136 % in 1990³⁴.

What allowed this high level of debt was precisely the cumulative mechanism of this rise. The rise in the prices of financial assets and real estate produced considerable latent capital gains which augmented the market value of equity capital. So, a rising debt level could be compatible with a falling debt/equity capital ratio, while the debt/income and financial cost/income ratios also rose. The financial structure thus become fragile in the Minskian sense.

The dynamics of the asset market and that of the fundamental factors moved in more divergent directions. What was significant was that the divergent evolution of the two prices, the price of assets on the one hand and price of current products on other one. Also, comparisons with the previous land boom (1972-1973) show the different characteristics of the last speculative boom. While the precedent happened in an environment of high inflation, this time the increase of assets prices was not accompanied by inflation: so, while land prices increased by 140 % between 1986 and 1990, consumer prices and nominal wages advanced only by 7.8 % and 20 % respectively for the same period³⁵.

Facing such 'unaccustomed' situation, the monetary policy authority (The Bank of Japan) had a dilemma. Because, when current prices and assets prices move in the same direction, the direction of monetary policy is clear; but when asset prices increase while current prices remain stable, the direction of monetary policy is not so clear³⁶. The BOJ was in this kind of situation in 1989. According to N. Takafusa, in spite of the stability of the current prices, the BOJ should have tightened credit conditions, given the movement in assets prices³⁷. But, to compensate for the adverse effects of the appreciation of the yen, the BOJ maintained a low interest rate.

³² The number for the USA for the same years is 24%, for France (1989), 11-12%. (Avelin, 1995)

³³ By contrast, the ratio of asset value in relation to the GDP remained stable in the USA since 1955 (4 to 6 times of the GDP for the security and real estate) (Avelin, 1995)

³⁴ Aglietta, 1995, p. 62

³⁵ Avelin, 1995, p. 147; see also Tohyama, 2000, p. 83

³⁶ Kindlegerger, p. 100.

³⁷ Nakamura Takafusa, *Lectures on Modern Japanese economic history, 1926-1994*, 1994, p. 298-299

The bursting of the bubble led to a sequence rather typical of debt deflation that we presented in section 1³⁸. Distress sales led to a fall in prices, not only asset prices but prices of current products. Deflationary tension aggravates the financial condition of banks and firms, which drives them further into distress sales. A kind of reversed positive feedback worked in reverse compared with the euphoric phase.

What is then the nature of the Japanese financial crisis? Is it a cyclical crisis, which can be reduced to the general notion of Minskian financial fragilization? We tried to show structural and institutional particularities of the Japanese economy which conditioned the sequence leading to the financial crisis. Indeed, this sequence, historically specific, did not work against the general notion of a Minskian financial crisis. But, the analysis of this historical particularity allows us to understand the mechanism by which a financial crisis is transformed into a systematic crisis (not a cyclical crisis).

As Lazonick observes, the Japanese financial crisis from the beginning of the 1990s can be considered a consequence of the transformation of method by which the Japanese financial system allocates resources, accumulated by the industrial success of the country³⁹. Financial Liberalization, which was itself initiated to a great extent by this success, marked a **rupture of coherence** of the institutional **players?**, including routines and practices which supported the previous growth. The economic development within the a regulation mode created conditions of change and an eventual move away from this regulation mode. From this point of view,

“the Japanese financial crisis of the 1990s is the result not of an underlying weakness in the productive capacity of the Japanese economy, but of the transformation of the role of the nation’s financial sector with the maturation in the 1970s and 1980s of perhaps the most highly successful national economic development effort in world history.”⁴⁰

The Japanese crisis of the 1990s is not merely a cyclical and short-term crisis; it is neither proof of the weakness of the overall postwar Japanese model. It must be considered a systematic crisis, provoked to a great extent by economic development during the previous institutional set-up which we define as a system of financial mobilization. As much as the loss of institutional coherence is the main reason for this crisis, its end passes through the reconstruction of a **new coherence**.

3. From financial crisis to systemic transformation

3-1. Of the **rupture of coherence** in financial crisis

In the first section, we introduced the hypothesis that the debt structure is an

³⁸ Fisher, 1933, CJE.

³⁹ Lazonick, p. 2

⁴⁰ Lazonick, p. 19

explicative variable of the *modus operandi* of financial fragilization and the subsequent crisis. From the preceding analyses, we identify four key explicative elements of the Japanese crisis of the 1990s:

- (a) sectoral investment characteristics;
- (b) respective roles of the IBG complex; the public sector and private sector;
- (c) role of the foreign sector;
- (d) role of financial and land asset markets.

Table 5 sums up the results⁴¹. As the table suggests, there is no unique *model sequence* applicable to all particular cases; the *model sequences* pertinent to each economic model correspond to the particularities of the economic system, which also explains the particularities of the development pattern. In our model, for long-term development, the nature of the investment and the respective roles of the IBG complex and others are significant. In the Japanese model sequence, commercial banks and real estate firms (financial and land assets) played a key role in financial fragilization⁴².

Table 5: The elements of the *modus operandi* of the Japanese financial crisis in comparison with the Korean financial crisis

	Japanese <i>Model sequence</i>	Korean <i>Model sequence</i>
Period	86-90	94-97
Nature of investment	Investment in the real estate, in financial assets	Investment in manufacturing industries
Role of the the IBG and of the rest	Crucial role of banks and real estate firms	IBG, non banking institutions
Role of public sector	weak	weak
Role of foreign sector	weak	++ inflow of foreign capital
Asset markets	Real estate and financial markets	
Cognitive conditions	Euphoric anticipation and speculation	Euphoric anticipation and excessive investment

One of the central elements of the FF process resides in the bank-industry relationship. As much as the particular relationship between banks and firms plays a decisive role in financial mobilization, it also plays a determining role in financial fragilization. The role of mobilization and amplification is also key. In an economy where financial constraint is significant, particular relations between banks and firms play a determining role in the allocation of credit. As figure 11 shows, the practice of bank lending guaranteed by collateral and '*Goodwill*' explains the correlation between financial constraint and macroeconomic performance⁴³. The institutional set-up of financial

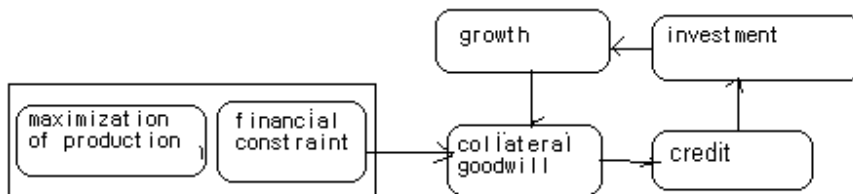
⁴¹

⁴² In Korean sequence, it is rather the IBG complex (chaebols) which acquired 'free' access to financial resources, after financial liberalization and after gaining autonomy from the State, that played a decisive role.

⁴³ See Kiotaki et Moore, 1997. as Kyotaki and Moore remarks, the '*goodwill*' of Veblen can play the same role in this regards. See Veblen, *The theory of business enterprises*, 1904, p. 173

mobilization is constituted in such a way that firms move towards maximizing their market share (and maximizing investment) and financial constraint is real and effective. In this set-up, [the particularities of the modality of the functioning of financial constraint have a differential effect on macroeconomic dynamics.](#)

Figure 11: 'Goodwill collateral' and credit



How then can we explain, theoretically, the relationship between financial constraint and macroeconomic performance? It is the dual characteristics of concerned assets and *goodwill* that play a decisive role in the intermediation between firms and banks: (i) assets: as production factors and collateral (for example land assets); (ii) the *goodwill*. When credit depends on these two factors, the financial system plays a powerful role in amplification. Before LF, the monetary authority played the role of stabilizer. But [FL gave banks to relations - undertaken a capacity to play the role of booster entirely.](#) Firms and financial institutions were not well adapted to the new environment of liberalized finance; the financial institutions did not accumulate necessary competence in risk management; and the State retreated from previous modes of governance without installing an alternative structure. All of these elements led to investment-led growth, but it was structurally fragile, as it was accompanied by financial fragilisation.

Therefore, it is the [rupture of coherence](#) launched by FL which caused the Japanese financial crisis. Following R. Boyer (2004), Yamada (2000), we can consider the loss of coherence (and institutional complementarity) of the regulation mode to be the main cause of the financial crisis.

The economic development itself created conditions for financial liberalization and therefore the [rupture of coherence](#). Notably, the creation of technological and financial autonomy of large companies (IBG complexes) from the bank, appears as the main structural change in our explanation. All these lead us to consider this crisis as systematic not only by their importance but also and by their nature.

3-2. Systematic transformation and emergence of new macroeconomic regularities

A comparison of economic performances before and after the rupture of coherence leads to ask if a new macroeconomic regularity appears. In particular, the

divergent movement of assets prices and current prices is an important change to analyze. If, as H. Minsky pointed out, ‘the business cycles results from interaction of these two price levels’⁴⁴, the divergent movement of these two price levels during the ascendant phase are significant. This concerns new macroeconomic regularity.

Table 6: Fordist growth regime and finance-led growth regime⁴⁵

Growth regime	Fordist	Finance-led growth regime
Regime of competition	Monopoly, oligopoly or controlled competition	Reinforced competition, domestic and international
Price regime	<i>Mark-up</i>	Competitive prices
MFS	Regulated MFS	Liberalised finance
Center of decision making	Bureaucracy of large enterprise	Financial market
Inflation or deflation	Inflationary tendency ⁴⁶	Deflationary tendency
Major macroeconomic relationship	Trade-off between unemployment and current prices (Philips curve)	Trade-off between unemployment and asset prices
	« such costs leads to a form of self-fulfilling prophecy » (Minsky, 1986, p. 156)	Self-realization of anticipation in the financial market (Orléan, 1999)

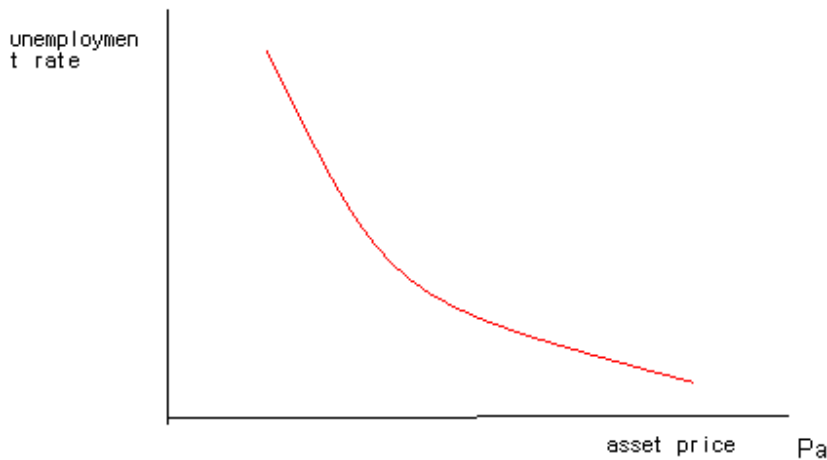
On this subject, consideration of this change in the context of more general phenomena is necessary. It especially concerns the emergence of a new growth regime, a finance-led growth regime in which financial liberalization plays a restructuring role in the institutional set-up. A comparison between a Fordist growth regime and finance-led growth regime reveals the nature of fundamental changes in macroeconomic regularities. Several structural changes differentiate the two growth regimes (table 6). The crucial change is the macroeconomic relationships between growth and employment on the one hand and the dynamics of price levels on the other. While at first, there is a 'Trade-off' between the unemployment rate and current prices, in the finance-led growth regime, there is a 'Trade-off' between the unemployment rate and asset prices.

Figure 12: The trade-off between the unemployment rate and asset prices

⁴⁴ Minsky, H. (1986). "Stabilizing an Unstable Economy.", p. 143

⁴⁵ Inspired from Aglietta (2000), Boyer (2000), Aglietta/Rebérioux (2004)

⁴⁶ Here, the remark by Minsky seems to be pertinent: “inflation may be the price we pays for depression-proofing out economy » (H. Minsky, 1986, op. cit., p. 147)



What caused this change? A major change in the structure of macroeconomic functioning concerns the channels for growth. Previously, the price regime has been a monopoly or oligopoly and were supplemented by passive MFS and an accommodating monetary policy which led to inflationary pressures. After FL, competitive prices of the goods markets became predominant and asset prices of the liberalized financial market become conventional; in the goods market, deflation became predominant; correlations between credit and asset prices led to the financial business cycle⁴⁷. What results is a 'Trade-off' between the unemployment rate and assets prices (figure 12).

In this situation, the monetary authority is in a dilemma: should it stabilize asset prices with the risk to growth, while the increase in asset prices is a condition to assist growth to the overall economy?; or, should it leave asset prices, which would assume a risk of overheating the entire economy as well as over-borrowing and eventual debt deflation? Equilibrium prices of assets are the most difficult to determine because the anticipation of future events plays a decisive role in this market. It is all the more delicate when unemployment remains and the short-term boom is far from absorbing this unemployed. What is optimal level of euphoria to arbitrate unemployment (job growth) and the risk of destabilizing the financial system? We can say that with FL and new forms of competition (domestic and international), a new macroeconomic regime has appeared.

Can we observe a new similar macroeconomic situation in the Japanese economy after the crisis? Certainly, the boom in the Japanese economy in the second half of the 1980s took place in a situation where (i) full employment and (ii) increases in asset prices; the debt being nothing unusual for economic agents accustomed to this, which aggravated the possible risk of destabilization. In spite of all these particularities, the movement of relative prices CP / AP and macroeconomic performances after the financial crisis suggest several elements which lead us to consider the Japanese crisis to be an archetype of a crisis of a finance-led growth regime. Consequently, the monetary authority is in a dilemma: the trade-off between growth (job creation) and financial fragilization. In this

⁴⁷ For the detailed mechanism of interaction between credit and assets prices, see section 1 ; and Kiyotaki, N. and J. Moore (1997). "Credit cycles." *Journal of Political Economy* **105**(21): 211-248.

new growth regime, the two risks are to be pointed out: the risk of instability and the risk of dual growth.

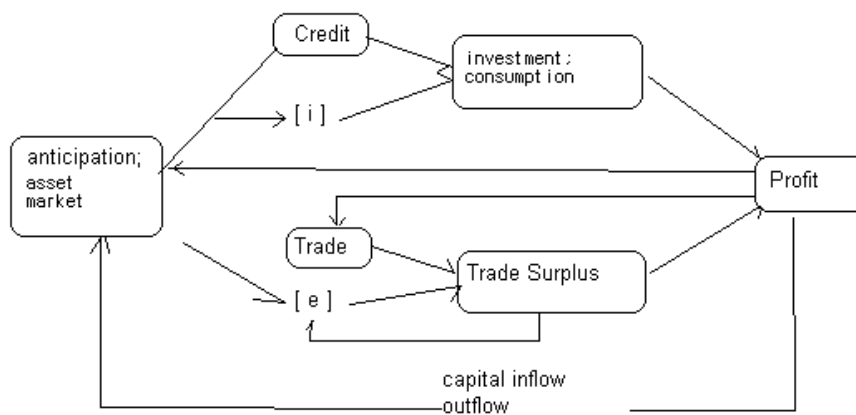
3-3. The risk of instability and the risk of dual growth.

To explain the new situation and its inherent risks, let us begin with a simple equation *'benefits equals investment'* which is, according to H. Minsky, the fundamental macroeconomic relationship which determines the dynamic behavior of a capitalist economy endowed with a complex financial structure⁴⁸. In this fundamental relationship, it is the financed investment which allows for a high profit rate; the latter being the main dynamic force of a capitalist economy. It also applies not only to investment but also to the consumption financed by the benefits, to the trade surplus and to public expenditure as much as they contribute to increased profits. Variables determining profit being given, there can be several ways to describe them. As Minsky says,

*“there are different ways of rigging an economy to attain a global profit target. But the way the economy is rigged affects relative prices, the money price level, the distribution of income, the stability of the economy, and the economy’s future resources.”*⁴⁹

Figure 13 illustrates a simplified macroeconomic mechanism.

Figure 13: A Minskian simplified macroeconomic circuit



Notes: (Credit), quantity of credit; (i), rate of interest; (Trade), trade balance; (e) exchange rate.

In this schema, several mechanisms of adjustment are shown: internal and external adjustments, adjustment by quantity and by price. In the internal adjustment, there is a change in credit quantity and interest rates; in external adjustments, there is a

⁴⁸ Minsky, 1986, p. 144

⁴⁹ Ibid., p. 144-145

change in the trade balance and/or the exchange rate (table 7).

Table 7: Internal, external adjustment; adjustment by quantity and adjustment by price

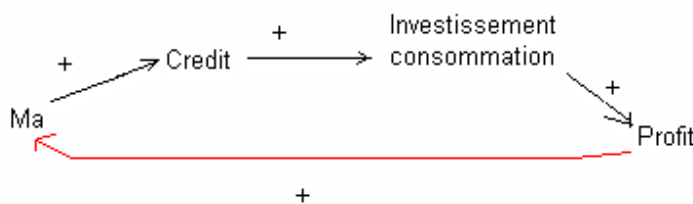
	Adjustment by quantity or by price		Elasticity of ajustement
Internal adjustment	(Credit)	Adjustment by quantity	
	(i)	Adjustmen by prices	Elasticity of Investment in relation to i
External adjustment	(Trade)	Adjustment by quantity	
	(e)	Adjustmen by prices	Elasticity of trade surplus in relation to e

In a world of liberalized finance, the financial market plays a regulating role of the state of the entire economy. Notably when the financial constraint of firms is significant, the asset market can play an amplifying role. In our simplified model, variables (i) and (e) are subject to the liberalized financial market and are added to the adjustment mechanisms.

To further discuss the two different but related risks, we construct two models, the criteria of differentiation, which is the importance of the external adjustment mechanism, or the degree of the autonomy of an economy (or economic zone) in relation to the world market. They are named the ‘triad economy’ and ‘small *open economy* (*small open economy*) or ‘economy with small money’ respectively.

(A) « Triad Economy of Triad »⁵⁰: elasticity of T related to (e) is low

Figure 14: The simplified functioning model of the triad economy (ascendant phase)⁵¹



Ma: asset market

Table 8: The growth of main variables during business cycles

	Phase A (ascendant)	Crisis	Phase B(descendant)
Ma-Pa	↑		↓
Credit	↑		↓
(i)	↓		↑
I, C	↑		↓
(e)	↑		↓ or relatively stable*

⁵⁰ Inspired from Veblen (1904) ; Kindleberger ; Minsky ; Kiyotaki et Moore (1997) ; Aglietta et Reberieux (2004)

⁵¹ In the descendant phase the signs of the coefficients are reversed.

	Investment-led growth (speculative)		Debt deflation (recession or depression)
Ex	Japan : 1986-1990		Japan : 1991-2003

*or the elasticity of Ts in relation to (e) is low (in other words, the economy is not vulnerable to the external shocks)

(B) "Small open economy"⁵²

For an economy with a small amount of money, external adjustments (therefore the exchange rate, e), must be added to internal adjustments (interest rate, i). We introduce sector differentiation and technological distance to account for the effects of external adjustments, according to sector. In fact, this differentiation is logical, given our concept of a mobilized economy, according to which this led to dual growth. The table summarizes the sector characteristics. The model has multiple sectors, heterogeneous and hierarchical.

Table 9: Sectoral differentiation, an economy with three sectors

	S (I)	S (II)	S (III)
Nature of goods	Tradable	Tradable	Non tradable
Technology level	+++	+	+
Nature of competitiveness	Quality competitiveness	Price competitiveness	0
Elasticity of T (e)	low	High	0
Access to credit	easy	Difficult	Difficult
Elasticity of I (i)	low	low	Low

*Before FL (convergent conjuncture)

What is a typical sequence before FL? Investment leads to economies of scale and 'learning by doing', which allows to improve competitiveness; the chronic undervalue of the local currency allows high price competitiveness, which provokes commercial conflicts with other economies. Gaining an impulse from this growth and the subsequent optimism, asset prices quickly increase, which makes it easier to access credit for firms. Investment and profits continue to increase. So the high level of investment and rapid growth of exports allow an 'explosive' growth. This mechanism implies a high level of domestic savings which restricts inflationary pressure. With rapid economic growth, the financial structure of firms becomes more and more fragile.

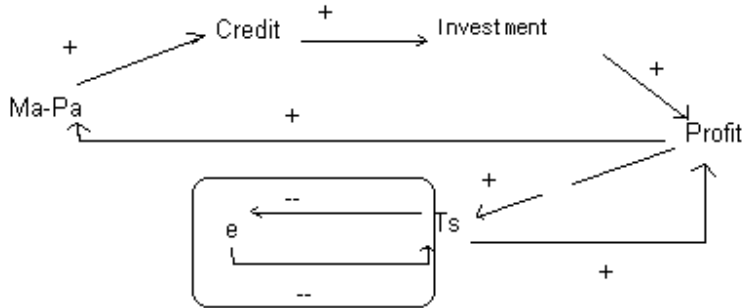
*After FL (divergent conjunctures)

From FL comes a complex, irregular business cycle, since the sectoral conjunctures are divergent. In the ascendant phase, growth is drawn by investment in S (I) and the growth impulse is propagated to sector S (III). But, facing competition from

⁵² Inspired from Aghion, Bacchetta, Banerjee (1999), « capital markets and the instability of open economies », CEPR Discussion paper 2083; Kalantzis, Y. (2005), "Désindustrialisation et crise financière dans une économie émergente", *Revue Economique* 56(3).

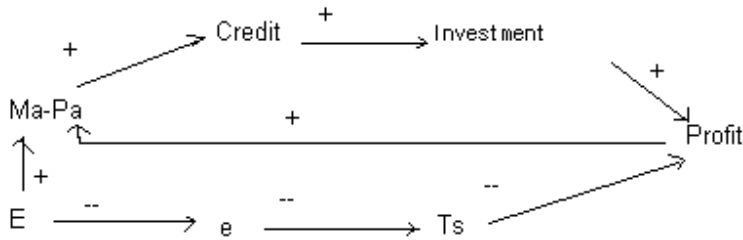
imports, S (II) experiences the reduction in production and investment. The sectoral conjunctures diverge.

Figure 15: *Model sequence before FL.*



Ma-Pa: asset markets-asset prices; Ts: current surplus

Figure 16: sequence of the macroeconomic variables of a small open economy (ascendant phase)



E: Net capital inflow

In the descendant phase, growth is fed by exports (owing to the depreciation of the local currency). But since investment is weak, growth is somewhat slowed. The weight of S (II) increases at price S (III) (or 'development of the service sector ' is decelerated in comparison with phase A).

As for sector development, growth of S (I) led by productivity gains, notably from rationalization, the last exercises pressure over the wages of S (II) and S (III). The effects of demand (of sector S (I)) can lead to the increase in demand for S (II) and S (III). If S (I) increases the trade surplus, this will lead to appreciation of the local currency and reduction of price competitiveness S (II). The dismissal (DECREASE?) of S (II) adds pressure on sector S (III). The low wages of S (II) and S (III) prevent modernization of these sectors. The investment in fixed capital and the level of labor productivity of S (II) and S (III), remain low. Therefore growth of S (I) is accompanied by unemployment in S (II) or downward pressure on the wages of S (II) and S (III), which leads to lower levels of investment in fixed and human capital and to low levels of productivity in these sectors.

Table 10: Evolutions of main variables in the course of the business cycle

	Phase A	Crisis	Phase B
Ma-Pa	↑		↓
Credit	↑		↓
(i)	↓		↑
Investment	↑		↓
	Investment in S (I) ->linkage effects on S (III), disinvestment in S (II)		Exportation of S (I) et S (II); the weight of S (II) rises at the cost of S (III)
E	↑		↓
(e)	↓		↑
Ts	↓		↑
	Price competitiveness decreases, trade surplus diminishes		Price competitiveness augments and 'trade surplus' increases
	Investment-led growth		Export-led growth
Structure sectorielle	S (I)/S (I, II) ↑ S (II)/S (III) ↓ (in terms of employment and added value)		S (I)/S (I, II) ↑ S (II)/S (III) ↑ (in terms of added value and employment)
	« Tertiarisation »		« reindustrialisation »
Ex	Japan : 1985-1990		Japan : 1991-
	Dualist growth; complex and irregular business cycle		

The (Anti-inflationary) monetary regime prevents inflation. Only the euphoric anticipation notable in sector S (I) and/or the asset market (financial and real estate) which can absorb surplus financial resources of S (I), therefore develop networks of (private) debts, which can lead to general growth to the entire economy.

With the decreased anticipation, excessive private debt is then liquidated, and debt deflation begins. The economy can move into the recession which will have an influence first on sectors S (II) and S (III). There additional pressure on the wages of S (II) and S (III), postponing investment and modernization of sectors S (II) and S (III). The table sums up movements of the main variables in the course of the business cycle.

An important source of instability in the economic system resides therefore in the functioning structure. This structure produces increased inequality and growth with 'multiple' speeds (unequal development, by sectors, by regions), which adds to the instability of the system with the [divergence of the sector conjunctures](#). This not only increases the level of uncertainty which shortens the time span of the agents, but increases transaction costs.

Conclusion

The analysis of certain characteristics of new macroeconomic regularity asks what the conditions of coherence of the entire system which could lead to sustained growth and

in what way will they differ from former coherence regimes. This question leads us to investigate institutional reforms as a condition for a new coherence. The analysis of the conditions for coherence of the previous system does not give the final answer to this question. If a systematic crisis is caused by the consequences of endogenous evolution of the system, a new coherence must be found for the new data. In other words, to think of new conditions of coherence means to return to the conditions which drove the previous system (the mobilized economy): *that is, the ' Backwardness '*, formation of the nation-state and learning effects. The systemic crisis of the mobilized economy causes us to re-think these historical conditions. Certainly, the analysis of the internal functioning of EM allows us to understand better the nature of the crisis, but the previous success does not justify the application of old institutions to the new situation. As much as the crisis is endogenous and systemic, a new coherence can only be the result of institutional innovation, certainly conditioned by the inheritance of the past, but never a simple replication.