

Is a finance-led growth regime a viable alternative to Fordism? A preliminary analysis

Robert Boyer

Abstract

The viability and desirability of a finance-led growth regime is first assessed against the historical evidence about the many alternative regimes that have been proposed as successors to Fordism. A purely hypothetical model is then built by assembling various hypotheses derived from the observation of current American trends. The imposition of financial norms, such as shareholder value, requires a new and coherent architecture for the mode of governance of firms, the form of competition, the wage labour nexus and the objectives of monetary policy, public budget and tax system. According to the model, any requirement for increased profit has a variable macro-economic impact on wages and economic activity according to the size of accelerator effects and the relative importance of wage and profit in income formation. The stability of an equity-based regime depends on monetary policy which controls financial bubbles and thus the diffusion of finance may push the economy into a zone of structural instability. The next major financial crisis may originate in the USA whose economy approximates most closely to the model. But, the so-called American 'new economy' combines diverse but interdependent structural transformations: diffusion of Information and Communication Technologies, search for new rules for competition, increased flexibility in wages and employment, shift from manufacturing to services. Finance is an element in, but not the whole of, this complex emerging regime.

Keywords: *Régulation* theory; growth régime; new economy; post-Fordism; shareholder-value; institutional complementarity; financial crises.

Robert Boyer, CEPREMAP, CNRS, E.H.E.S.S., 142, Rue du Chevaleret, 75013 Paris, France. E-mail: robert.boyer@cepremap.cnrs.fr



Introduction

Since the demise of the Fordist accumulation regime in the US (Aglietta 1976), much research has been devoted to investigation of possible successors to this unprecedented synchronization of mass production and consumption. Many structural and multifaceted transformations have occurred and stimulated various proposals about the nature and properties of alternative accumulation regimes. It is important to emphasize that the 1990s have seen the emergence of a totally new candidate for the succession to Fordism, as a finance-led regime has captured and fascinated many observers including regulationist researchers (Aglietta 1998). This is the starting point of the present article.

The bulk of the development is devoted to analysing the theoretical and empirical relevance of a financialized growth regime as the latest candidate for replacing Fordism. First, it is argued that, in such a regime, the hierarchy among institutional forms (Boyer and Saillard 2000) is drastically shifted: the financial regime plays the central role that used to be attributed to the wage-labour nexus under Fordism. Second, a steady state model describing the full implementation of such a financialized model is then presented, discussed and solved in various steps. Stability of short-run equilibrium in such a model is a major concern, because such stability is a preliminary condition for studying long-term properties. Special emphasis is put upon the new role of the Central Bank in the context of a fully financialized and potentially unstable economy. Third, the empirical relevance of this model is assessed by looking at the statistical evidence on structural parameters. This indicates that the mechanisms necessary for such a regime are quite unequally diffused among OECD countries, suggesting the need for some caution in deriving conclusions from the theoretical model. A fourth section considers some necessary extensions of the analysis. Finally, all these analyses are synthesized in order to provide some interpretations of the emerging imbalances, as they appear in the special case of the United States.

Muddling through the Fordist crisis: many growth regimes that did not materialize

Since the American crisis, initiated by productivity slow-down and accelerating inflation at the end of the 1960s, economists, specialists in technical change, sociologists and even more so politicians have contemplated many ways out of the crisis. A short retrospective analysis may help with understanding the points of similarity and difference between these earlier visions and contemporary hopes and fears about a restructuring of accumulation which is dominated by finance. Each of the visions calls for a specific institutional architecture, accepting it is unlikely that each country will be part of the related growth regime (Table 1).

- Since the mass-consumption and mass-production growth regime ran into crisis under the strains associated with productivity slow-down, from the

1970s to the mid-1980s, an emerging synergy between mass production and product differentiation has been identified as a means of overcoming one of the major shortcomings of Fordism (Boyer and Durand 1997). In this period, up to the mid-1980s, Japan was supposed to be the world leader in the exploration of such a Toyotist regime and many analysts seriously considered a possible Japanization of national production systems. At the end of the 1990s, the severity of the Japanese financial crisis has put an end to this belief, even if the associated shift from overestimation to underestimation of Japanese manufacturing performance is too extreme. Anyway, the search for other alternatives is open.

- In this respect, the long-run history of industrial revolutions suggests a second and quite different hypothesis: the emergence and diffusion of information and communication technologies (ICT) which means the implementation of a totally new productive paradigm. This is a typically Schumpeterian hypothesis, now increasingly accepted but not unchallenged. First, detailed statistical and econometric studies suggest that the impact of ICT on growth and employment is positive but the size of the effects are indeed quite modest (Boyer and Didier 1998). Second, even in the US as the leader in ICT, the job creation in ICT-related industries is important but does not represent the major source of the so-called American miracle in terms of job creation. Third, some international comparisons show that there is no correlation between the mastering and diffusion of ICT and unemployment performance (Amable *et al.* 1997).
- But clearly, all innovations in the contemporary world cannot be reduced to ICT since many other sources of technological and scientific advances are observed and may play a major role in fostering growth. Thus, the mechanisms for diffusing information should not be confused with knowledge creation and use. The advances in basic knowledge would be more easily converted into profitable new products by the close articulation of scientific research, market analysis and flexible manufacturing. This would define a new paradigm and is the premise of the OECD's knowledge-based economy (KBE) (OCDE 1999). But one may challenge the generality of this phenomenon. Furthermore, this assembly of production and sources of economic performance simultaneously generates various forms of tacit knowledge that increase the power of a limited section of employees who are able to implement the radical innovations which determine the competitive position of a firm: creative people in advertising; financial experts creating new options; software designers; and artists at the roots of the leisure industry.
- But there is yet another vision of the future of growth and employment, as definitely service led. On one side, the manufacturing sector experiences a slimming down by the subcontracting of many tertiary activities to highly specialized firms in accounting, finance, marketing and human resources management. Therefore, many sources of firm competitiveness are manufactured within the so-called service sector, especially in the case of modern business services (Petit 1998). On the other side, life-styles are becoming more

Table 1 Alternative emerging growth regimes and redesign of institutional forms

<i>Institutional forms</i>							
<i>Growth regimes</i>	<i>Wage-labour nexus</i>	<i>Form of competition</i>	<i>Monetary regime</i>	<i>State/society relations</i>	<i>Insertion into the international regime</i>	<i>Coherence and dynamic of the growth regime</i>	<i>Typical case</i>
<i>Toyotism</i>	Employment stability against work malleability.	By quality and product differentiation of mass products.	Active central bank, promoting growth.	Developmentist State.	Phase of export-led growth.	A follower of typical Fordist growth regime.	Japan until 1990
<i>Service led</i>	Strong heterogeneity/ inequality across industries.	Local and oligopolistic for traditional services.	Trade off between inflation and unemployment.	Strictly limited State, promoting flexibility.	Internationalization of modern business services.	Extensive growth with rising inequality.	US (1980s)
<i>Information/ communication technologies led (ICT)</i>	Dualism according to the ability to master ICT.	Linked to a dominant position in ICT.	Role of risk capital and credit.	Building of public infrastructure for ICT.	New international division of labour according to the mastering of ICT.	Difficult to achieve for lagging countries	Silicon Valley (since mid-1980s)
<i>Knowledge-based economy (KBE)</i>	Dualism according to schooling and cognitive skills.	Governed by the speed of innovation.	Credit, finance and even monetary policy pulled by innovation.	Schumpeterian welfare state and State.	New international division of labour according to KBE.	Difficult to implement in countries with few academic resources.	US (1990s)

Table 1 continued

		<i>Institutional forms</i>					
<i>Growth regimes</i>	<i>Wage-labour nexus</i>	<i>Form of competition</i>	<i>Monetary regime</i>	<i>State/society relations</i>	<i>Insertion into the international regime</i>	<i>Coherence and dynamic of the growth regime</i>	<i>Typical case</i>
<i>Competition led</i>	External market flexibility and competitive wage.	Privatization, deregulation, liberalization.	Stability of monetary policy.	Proactive and market-enhancing State.	Wider opening to international trade, investment and finance.	Risk of over-capacity and deflation.	Most OECD countries (since 1985).
<i>Export led</i>	Frequently competitive.	By price and/ or by quality.	Targeted towards price and exchange rate stability.	New mercantilist strategy.	Key institutional form.	Strong exposure to external disturbances.	East Asian NICs (before 1997)
<i>Finance led</i>	Employment flexibility, profit sharing and pension funds.	Mainly on financial markets, but trend towards oligopoly.	Prevent the emergence of financial bubbles.	Under scrutiny of financial markets: search for credibility.	Trend towards global finance.	Risk of systemic financial instability.	US & UK (1990s)

and more heterogeneous and call for highly specific personal services, with a high employment content. Some analysts even think that the transformations related to equal gender opportunity within the family and within society as a whole are powerful enough to engineer a new virtuous circle of changed lifestyle: transformation of consumption norms – insertion of new talents into the economy – new directions for innovation (Majnoni d’Intignano 1999). This vision of the future of capitalism has recurrently been proposed, but has not yet proved its complete relevance. Furthermore, does not the division of labour initiated by manufacturing, by ICT or by KBE, supply the leading factor in the so-called ‘tertiary economy’?

- A different view emphasizes the direct link between European growth and the competitiveness of nations, in a world increasingly open to trade, investment, finance and even some highly skilled professionals. During the long and painful 1970s and 1980s, almost every country has struggled to restore its competitiveness, either by labour-cost reductions or by innovations and quality. From a theoretical point of view, the form of competition, between firms and nations, is now governing structural adjustment in the wage labour nexus (employment flexibility, wage moderation, rationalization of the welfare state), the extent of taxation on mobile and immobile factors as well as economic policy formation itself. Thus, a recovery of growth has been frequently assumed to depend on the emergence of a totally new growth regime: its characteristics would include cost and price moderation, increasing exports, spill-over to investment and consumption, recovery of demand and cumulative growth through interaction of competitiveness and domestic demand. But the South Asian crises have shown that such strategies are finally up against severe structural limitations, especially in a world of financial innovation and globalization and major uncertainties about the prospect of world trade.
- There is one further but nevertheless important alternative vision of the future of capitalist growth, which is becoming increasingly influential in the second half of 1990s. Many giant mergers, capital mobility between countries, pressures on corporate governance, diffusion of equity among a larger fraction of population; all these transformations have suggested the emergence of a finance-led accumulation regime. This would lead to a totally novel regulation mode, currently labelled ‘the new economy’: this regime would combine labour-market flexibility, price stability, developing high tech sectors, booming stock market and credit to sustain the rapid growth of consumption, and permanent optimism of expectations in firms. The capacity of each country to adopt and implement such a model would be a key factor in macro-economic performance and would determine that country’s place in a hierarchical world economy governed by the diffusion of a financialized growth regime (Aglietta 1998).

Two major lessons can be drawn from this brief survey. On the one hand, all these potential regimes are not equivalent from a class analysis point of view,

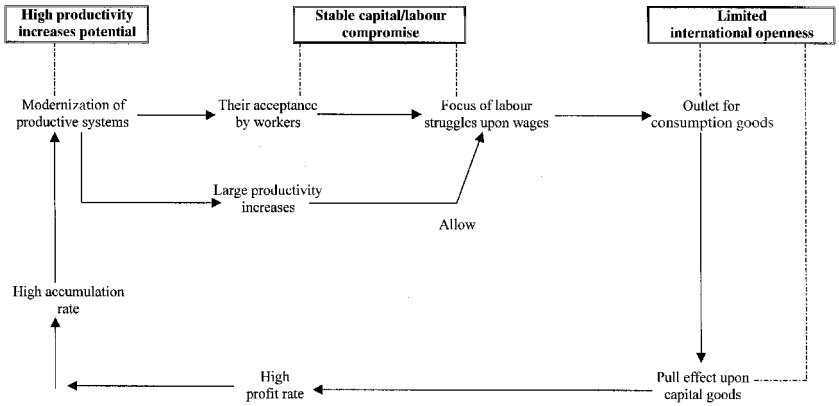


Figure 1 The virtuous Fordist growth and its three institutional conditions

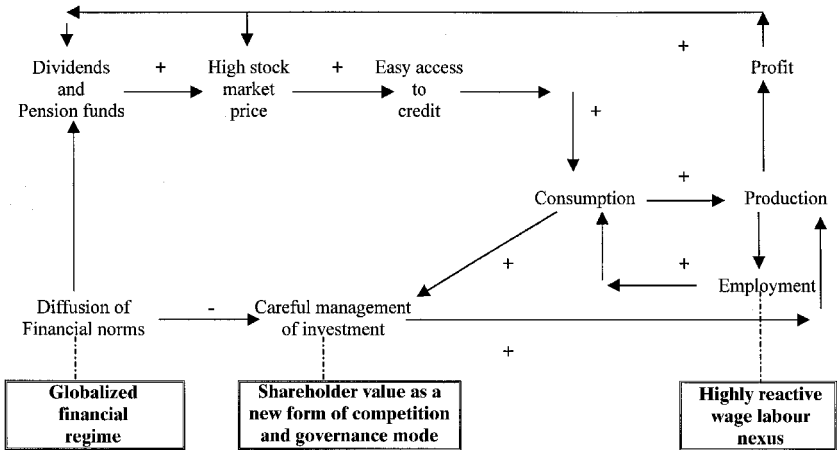


Figure 2 The mechanisms of finance-led growth and its institutional conditions

since they are built upon various, or completely different, institutionalized compromises. Consequently, the institutional configurations and emerging *régulation* modes are indeed diverse (Table 1). On the other hand, the current fad about finance has to be put into historical perspective and under close scrutiny, since almost all the previous scenarios have failed fully to materialize in the pure form. Therefore, it is likely that a form of hybridization between these pure systems will take place, with a different mix in each country according to political and social legacy, economic specialization and, of course, the strategic choices of key collective actors.

Nevertheless, it would be intellectually interesting to make a prospective analysis of the operating conditions of a finance-led growth regime which would

be poles apart from the post-war Fordist regime, in that the financial system would now occupy the central place previously held by wage compromise. For this purpose, we can derive some basic hypotheses from the American economy, which has long been committed to finding a system of growth which breaks with Fordism, if only because accumulation has become mainly extensive and based on the differentiation of modes of consumption and increasing inequalities (Boyer and Juillard 1995). It is therefore a question of finding the equivalent of what were the formalizations of Fordism (Bertrand 1983; Boyer 1988; Aglietta and Mendelev 1987), for this new regime. Just to capture the essence of the argument, a synoptic view compares a highly simplified Fordist accumulation regime (Figure 1) to a hypothetical finance-led one (Figure 2). The following developments give more substance to this second and new regime.

How financialization affects all institutional forms

The American example, like the tendencies in the British and European economies (Froud *et al.* 1998) and quite unlike the problems of Japan and the Asian financial crisis, makes it possible to diagnose the nature of the emerging economic system. Our aim is to define its properties and the possibilities of long-term reproduction quite apart from the transitional period when, for example, pension funds develop, leading to increased market prices and the appearance of a financial bubble. Financial history suggests such speculative bubbles will not disappear (Kindleberger 1978), but, if they did, what would be the dominant characteristics of an economy where finance has imposed its logic? The impact would *a priori* bear on at least five elements (Figure 3).

- The privileging of shareholder value primarily affects firm governance. Many large groups must increase the internal rate of return to levels which are compatible with the requirements of large international investors. But the transformation is more profound than this and does not affect only the volume, direction and mode of financing investment (arrow A in Figure 3).
- Indeed, managers are forced to review most of their management techniques, whether these concern the response to economic cycles, the degree of specialization or even the nature of the capital-labour compromise. All of these elements have to be re-calibrated to take into account the shareholder requirement for level and stability of rate of return. Thus, forms of competition and the nature of the employment relationship are directly affected. On the one hand, the financial markets will adjudicate between activities with similar rates of return so that competition shifts from the product market to the financial market. On the other hand, the need for flexibility is reflected in the use of new forms of employment contract (arrow B, Figure 3).
- Household behaviour is undergoing a striking transformation in relation to the Fordist post-1945 norm. Admittedly wages and salaries continue to be an essential component of reward, but two new mechanisms are emerging. On

one side, under the pressure for shareholder value, the wage bill has to react quickly to any discrepancy between actual and expected returns. Depending on the precise content of the capital–labour compromise, the related flexibility may affect either the direct wage or working hours and employment. But, on the other side, wage earners have access to financial gains, via direct equity holdings or, more likely, by the inter-mediation of pension funds. Consequently, the prospect of gains on the financial markets has a direct influence on the decision to save or spend. This is true whether households use pension-fund intermediaries or whether they invest their savings directly on the stock exchange, or even if they join savings plans run by the firm. This is why this system can be described as equity based (*'patrimonial'*) because wealth, as measured by the financial markets, tends to become an important influence on the consumption of durable goods and also in house purchase and indebtedness to banks. If they are sufficiently developed, these new behavioural elements can inject an unprecedented dynamic into consumption, on the model observed in the United States between 1992 and 1998 (arrow C, Figure 3).

- Relations between the State and the economy have themselves changed considerably in a great many ways. First, unsuccessful attempts to reduce public borrowing throughout the 1980s and then the 1990s have bequeathed a high level of public indebtedness, so that government expenditure is becoming increasingly sensitive to the actual rates of interest on state bonds. Next, and consequently, the financial markets attach great importance to restraint of public borrowing within strict limits (arrow F, Figure 3). Moreover, as the fiscal base no longer enjoys the same level of growth as it did in the thirty years of the long boom, there is increasingly strong pressure to rationalize public expenditure. The fact that capital has become extremely mobile causes the tax burden to fall on the less mobile factors, namely labour and possibly fixed assets (arrow E, Figure 3). According to this argument, taxation would become more pro-cyclical and no longer anti-cyclical as in a Keynesian system.
- Finally, and most importantly, monetary policy no longer has the sole function of ensuring the best *'policy mix'* between growth and inflation. The careful scrutiny of the international financial community and substantial openness to external competition deliver low inflation or even a deflation-prone economy where the central bank can much more easily defend price stability. These structural transformations grant a new degree of freedom just as the recurrence of financial bubbles gives the central bank a new role: monetary policy should now guide the development of the financial markets in the best possible way. These are quickly carried away by speculations which the central bank endeavours to contain. Ideally, it is the stability of the financial markets and no longer price stability which should be the key criterion when a fully financialized system has imposed its logic (arrow G, Figure 3).
- The difficulties of financing national insurance systems by redistribution, the concerns arising from an ageing population and the fragility of existing pension systems are among the factors which have encouraged the growth of

private insurance and saving via the capital market, as well as retirement pensions more geared to individual needs. This change affects the employment relationship just as much as the nature of the financial markets, since a large part of savings is then professionally managed with the aim of optimizing the medium-term return. The dynamics of market prices, for example, can be affected, with long-termists setting the trend and compensating to some extent for the impatience of the short-termists (arrow D).

This being the case, all the elements of final demand bear the consequences of the dominance of finance. Productive investment becomes more cautious since it has to guarantee a sustained higher rate of profit than in the past, but this development is offset by much easier access to the financial markets for large groups and by an increasingly favourable tax system. For its part, household consumption becomes more volatile. On the one hand, income from employment is more uncertain because of trends relating to hiring and firing employees, changes in working hours and the fact that pay is more sensitive both to the general climate and to the financial situation of the firm. On the other hand, credit is more readily available, but collateral (such as fixed assets or stock portfolio) is often a prerequisite. Consequently, speculative bubbles can move from financial to product markets much more directly than in the past. These developments are even more striking when account is taken of the dynamics of house purchase and the much stricter management of public borrowing and the corresponding expenditure. A final consequence is that financial markets ensure that capital is used effectively so that, in comparison with the Fordist period, productive capacities and the choice between rationalization or increases in capacity are transformed.

The whole macro-economic dynamic is thus driven by the compatibility between the expectations emanating from the financial markets, the reality of firms' profit growth and interest-rate dynamics, which the central bank is trying to direct. Even supposing that expectations are never disappointed, under what conditions is this new system viable, that is, likely to last for a period of one or more decades? Hence the interest of a very simple modelling exercise with a system that retains only the first three mechanisms (A, B, C), with an extension into monetary policy (G).

A model describing the determinants of macro-economic activity for a fully financialized economy

The above description leads to a very simple, basically linear model which takes into account the specific characteristics of this system. We shall comment briefly on the formalization choices made, the aim being to simplify as far as possible the features of a model that can subsequently be enriched by adding more financial variables, a dynamic analysis or even various non-linearities (Table 2).

Table 2 A finance-led growth model: the basic relations

(1) $D = C + I$	Closed economy without State or foreign trade.	FORMATION OF DEMAND
(2) $I = a \cdot K_{-1} \cdot (r - \rho) + b \cdot (D - D_{-1}) + i_0$	Investment determined by the difference between profitability and the financial norm and by a term for increasing demand.	
(3) $C = \alpha \cdot MSR + \beta \cdot W + c_0$	Consumption is set according to aggregate real wages and household wealth.	SUPPLY/DEMAND INTERACTION
(4) $K = K_{-1} \cdot (1 - \delta) + I$	Capital stock develops according to the rate of obsolescence and of new investment.	
(5) $\bar{Q} = v \cdot K$	Production capacity is determined by capital stock.	INCOME DISTRIBUTION
(6) $Q = Inf(\bar{Q}, D)$	The level of production is fixed, in the short term, either by capacity or effective demand.	
(7) $r = \frac{Q - MSR}{K_{-1}}$	The profit rate is defined as the gross surplus in relation to capital stock.	FINANCIAL AND MONETARY VARIABLES
(8) $W = q \cdot \frac{Q - MSR}{i}$	Wealth is calculated on the basis of profit, taking into account the interest rate and Tobin's q.	
(9) $MSR = f \cdot Q - e \cdot \rho + w_0$	Aggregate real wages of employees increase with demand but decrease with the financial norm.	
(10) $\rho = \rho$	The financial markets fix the profitability norm.	
(11) $q = \bar{q}$	Tobin's q is assumed to be exogenous	
(12) $i = j_0 + \phi \left(\frac{W}{Q} - r^* \right)$	The central bank sets the interest rate to avoid the formation of financial bubbles.	
(13) $r^* = r(Q, \Psi)$	The wealth/income ratio depends on the level of development and on the discretionary judgement of the central bank.	
Endogenous Variables: 1 $D, C, I, r, MSR, W, K, \bar{Q}, Q, i, r^*$	Exogenous Variables: 2 ρ, q	

All the parameters a, b, α , β , v, δ , f, e, ϕ are positive or nil.

- Financialization affects open economies, including third world economies, but here we have chosen to deal only with the pure case of the closed economy in which the financial dynamic develops entirely in the domestic arena. Moreover, monetary policy is retained as the only instrument of economic policy, because fiscal policy is generally neutralized by financialization (equation (1)). The model can be thought of as representing the American case, but it is definitely no more than a debatable approximation in the present context. It is better to think of the model as a formalization, equivalent to Fordism, which does not correspond in a direct and unmediated way to any particular economy.
- The financial norms are assumed to act through two main channels. The first takes into account the restrictive role of financial markets when they set a norm of increased profitability, even if easier access to financial markets can initially create a rapid expansion in investment. However, in a permanent system, *ceteris paribus*, raising the norm has a negative effect on investment (equation (2)). The second channel concerns the determination of wages and salaries. It will be noticed that equation (9) does not specify the relation between numbers employed and real wages insofar as, in this financial system, the question of labour productivity is not central as it was under Fordism. All that matters now is financial profitability, regardless of whether this is obtained by rapid increase of productivity, pay concessions by the workforce or (outside this model) oligopolistic rents arising from innovation.
- The description of household behaviour is enriched by a term describing the impact of wealth on consumption decisions (equation (3)). This effect is distinct from the effect traditionally considered in permanent income theories or from the effect of actual cash in hand, because it corresponds to a point in the history of capitalist development when individuals consider stock-market values before deciding between savings and consumption. This requires the development of household share or securities portfolios. This hypothesis is satisfied in the United States and Great Britain, but far from satisfied in other countries such as Japan, Germany or France.
- If we leave aside the effect of capital formation on the growth of production capacity and the impact of last period demand on investment for the time being, the model is static and the treatment of the financial market is extremely simplified. The aim is simply to describe the interaction between the norm of profitability required by the financial markets, and the actual rate of profit achieved *ex post*. As a result, Tobin's q is considered to be exogenous and in what follows it can be considered as equal to 1, which would not, of course, be the case in subsequent dynamic models. Moreover, it is assumed that wealth is measured on the basis of the interest rate as set by the central bank, an extreme hypothesis, but one that makes the features of this economic system clearly apparent.
- A distinction can be made between various relative prices (of consumption, capital goods, cost of capital) whose development is not without importance in a system of finance-led growth. As in the basic Fordist model, we assume the existence of a single product, even though we know this is a fiction. For

example, it might be that the price of capital assets is increasing by growing more slowly than the price of goods being consumed. However, the present version of the model cannot deal with this phenomenon, as it does not include any equations for productivity or employment.

- If we are considering employment problems, equation (9) can be broken down into two parts, with the same explanatory variables bearing on employment and wages respectively. This division can be made as a function of the specifics of each wage relation. Incidentally, this means that conflict in the labour market has no specific role to play in explaining the distribution of income, these conflicts being taken into account in the product market only through the level of demand.
- We should emphasize the novelty of the equation which specifies the central bank (or issuing institution's) reaction. If the model had to correspond to the American case, we would have to consider an interest rate set based on the inflation rate and of the level of activity. And a first prototype of our model did actually accept this hypothesis. But Greenspan's intervention in the autumn 1998 (to rescue American hedge funds which had embarked on misjudged speculation) and subsequent policy suggest that, in a world governed by finance, the issuing institution's essential function is the structural stability of the system. As a result, we have chosen to vary the intervention rate according to the difference between the observed wealth/income ratio and a policy judgement of what would be sound taking into account the level of income and an appreciation variable (equations (12) and (13)).
- Finally, the profitability norm demanded by the financial markets is totally exogenous, which relates to the short-termism of our model, which can, however, still deal with the conditions under which a macro-economic equilibrium can exist. In a dynamic generalization, equation (10) could be extended using an adaptive process taking into account the past record of the achieved rate of profit.

Although it is simple, this model makes it possible to highlight something of what is at stake in this system. We propose to reach a solution systematically, initially analysing effective demand, then its interaction with income distribution. An analysis of the stability zone of the previously described monetary policy completes the discussion of the viability of a financially led system.

Consumption and the demand regime are directly affected by financialization

The wealth behaviour of households has an important consequence. It has a direct effect on the propensity to spend income from employment: if employees fully integrated the choice between income from employment and wealth-based enrichment, the propensity to consume could even become negative, which shows the novelty of consumption behaviour in this system. Indeed, if equations

(3) and (8) are combined, i.e. if employees do not take into account the impact of their decisions on the formation of demand, but are on the other hand clearly aware of the favourable effect of wage restraint on their wealth, consumption will take the form of:

$$(14) C = \left(\alpha - \beta \cdot \frac{q}{i} \right) \cdot MSR + \beta \cdot q \cdot \frac{D}{i} + c_0$$

If we assume there is no speculative bubble, that is to say that q equals 1 and that the parameters are set according to the values which are currently accepted for the American economy, namely:

$$\alpha = 0.98 \quad \beta = 0.04 \quad i = 0.05$$

It emerges that the propensity to spend income from employment is far from conventional values. If we accept that American market prices demonstrate an overestimation of 40 per cent, i.e. $q = 1.4$, we are startled by the observation that an increase in the aggregate remuneration of employees, at a constant level of demand, would have a negative impact of -0.14 per cent. This illustrates both the simplified nature of the model and the explosive potential of this system. Furthermore, if the interest rate is reduced to 4 per cent, then, even if there is no speculation, the impact of an increase in the aggregate wages of employees on consumption becomes negligible. In brief, finance becomes dominant, but the result is only partial, because the level of effective demand now has to be determined, taking investment into account. When equations (1) to (3) in the demand block are combined with equations (7) and (8), with the interest rate considered for the time being as exogenous, the reduced equation describing the level of demand is as follows:

$$(I) \left\{ \begin{array}{l} (I)D = \frac{1}{\left(1 - \beta \cdot \frac{q}{i} - a - b\right)} \cdot \left[\left(\alpha - \frac{\beta \cdot q}{i} - a \right) \cdot MRS - a \cdot \rho - b \cdot D_{-1} + c_0 + i_0 \right] \\ \text{Which can be simplified to:} \\ (I)D = \frac{1}{A} \left[B \cdot MSR - a \cdot \rho - b \cdot D_{-1} + c_0 + i_0 \right] \end{array} \right.$$

This equation describes how the level of aggregate wages influences total demand. It is the equivalent of the validating equation for a Fordist model. But, discussion must concern the influence of wealth-related behaviour, which can be summarized by the parameter $\beta q/i$, which itself aggregates with coefficient a to determine the key parameter:

$$(15) a^* = \frac{\beta \cdot q}{i} + a$$

Measures the impact of profit and equity performance on demand.

Symmetrically, the demand system depends on a second critical threshold that measures the extent of the effects of increasing demand on investment:

(16) $b^* = 1 - \alpha^*$ Critical value of the accelerator affecting the demand system.

That being the case, we can reveal four demand systems corresponding to this economic interpretation (Table 3).

We are reminded, *mutatis mutandis*, of the issues raised when the Fordist

Table 3 Four demand regimes differentiated by the intensity of their equity effects and the significance of the accelerator

	<i>Profit effect dominates employees' earnings effect</i> $B < 0$	<i>Employees' earning effect dominates profit effect</i> $B > 0$
	$\alpha^* = \beta \cdot q/i + a$	
<i>Weak accelerator effects</i> $A > 0$	CASE 3 <i>Demand decreasing with employee wages</i> Raising ρ has a negative impact	CASE 1 Decreasing demand (the Fordist case) Raising ρ has a negative impact
	Imbalance between equity behaviour and the nature of investment	<i>Damaging effect of a profitability requirement on the Fordist virtuous circle</i>
$B^* = 1 \pm \alpha^*$	CASE 2 <i>Demand increasing (financial market effect)</i> Raising ρ has a positive impact	CASE 4 Decreasing demand Raising ρ has a positive impact
<i>A < 0</i> Strong accelerator effects	Virtuous case of new finance: employees' interests are compatible with those of the firm	Wage restraint is favourable to the employees despite the weakness of equity effects.

model was generalized to take into account growth led by profit and investments. In this case, the zone where profit can have a positive effect on demand is extended by the fact that the effects of wealth on consumption are included. But it is the same two parameters that characterize the investment determinants, a and b respectively, which play a decisive role. Two results follow from this discussion:

Result 1: When equity effects are well developed and if the financial markets lead to a generalization of investment behaviour determined largely by profitability, then a *virtuous system of financial growth* (Case 3) can be said to exist. In this system, raising the profitability norm does have a favourable effect on demand even if the accelerator effects are still considerable.

Result 2: If, on the other hand, financialization occurs in *an economy which is still dominated by wage-earning social relations*, where the wage is the essential determinant of the mode of consumption, raising the profitability norm has a contrary negative effect (Case 1).

Thus, the effects of financialization cannot be determined *a priori*, because the impact on the demand system depends on the configuration specific to each economy, so that (*a priori*) countries where the financial system exerts favourable effects can coexist with others where a Fordist logic continues to prevail.

Some financialized systems are unstable: a discussion of the model's solutions

For the sake of simplicity, let us suppose that it is demand which limits the level of activity (equation (6)), since we are interested in short-term equilibrium. If, on the other hand, we were interested in dynamics, we would have to discuss the case where it is production capacity (equation (5)) which limits the level of activity. It is thus convenient to resolve the model by supposing that equilibrium results from two intersecting determinations. On the one hand, what is the effective demand for an actual, given aggregate wage? It is the reduced equation (I) as has just been described. On the other hand, what is the level of aggregate wages for a given level of demand and a profitability requirement by the financial markets? The scenario described by equation (9) can be considered as being the second reduced equation (II).

$$\left\{ \begin{array}{l} (I) \quad D = \frac{1}{A} [B \cdot MSR - a \cdot \rho - b \cdot D_{-1} + c_0 + i_0] \\ (II) \quad MSR = f \cdot Q - e \cdot \rho + w_0 \end{array} \right.$$

That being the case, the model presents a very simple graphic solution that

also makes it possible to discuss the variable properties of short-term equilibrium. Four configurations appear, created by the demand system, since the wage determination system is assumed to be constant.

- *A financialized Fordist configuration*: where raising the profitability norm has a negative impact both for employees and for the economy as a whole. Both the demand system and the remuneration system suffer the unfavourable consequences of this rise, so that *ex post* equilibrium E2 is more unfavourable than the initial equilibrium E1 (Figure 4).
- *A fully financialized system*: where a rise in the profit required has a generally favourable effect on the level of activity, but not necessarily on earned income.

In the second case, demand changes favourably, but the rationalization implied by the increase in the profitability requirement has to be taken into account. As a result, employees do indeed benefit from the growth in demand, but can be penalized if the effects of reductions within the wage-earning sector prevail. Contrary to what is implied in a single demand system, employees can be losers in the financialization game, while the economy as a whole can attain a higher equilibrium (Figure 5).

- A third configuration describes a *'hybrid' financial system* in which the accelerator effects are not sufficient to bring about any growth in demand, but (in contrast) financialization plays a full role with regard to consumption behaviour. Thus an increase in the profitability norm leads to a reduction in the aggregate wages of employees and has ambiguous effects on the level of activity (Figure 6).
- A final possibility is a *paradoxical wage system*. The force of the accelerator effects allows the increase in the profitability norm to have a positive effect on demand but an ambiguous one on wages (Figure 7).

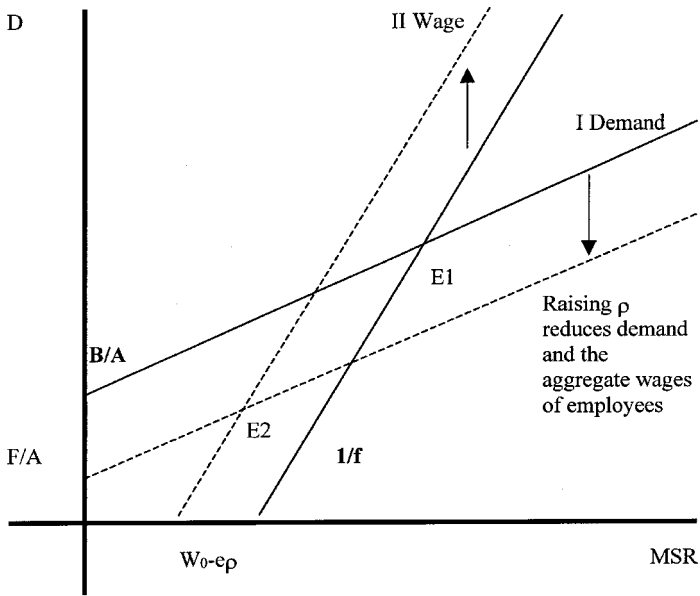
However, beyond these variable configurations, one general and essential result holds for all the systems. Contemporary political programmes often connect the development of employee savings in shares and bonds with a necessary increased flexibility of employees' remuneration. This is, moreover, often due to the weak bargaining power of the employees and their representatives. The stability of the configurations can be assured only if:

$$\left| \frac{B}{A} \cdot f \right| < 1 \quad \text{which is} \quad f < \left| \frac{\alpha - \alpha^*}{1 - \alpha^* - b} \right| = |H|$$

The demand solution thus takes the form:

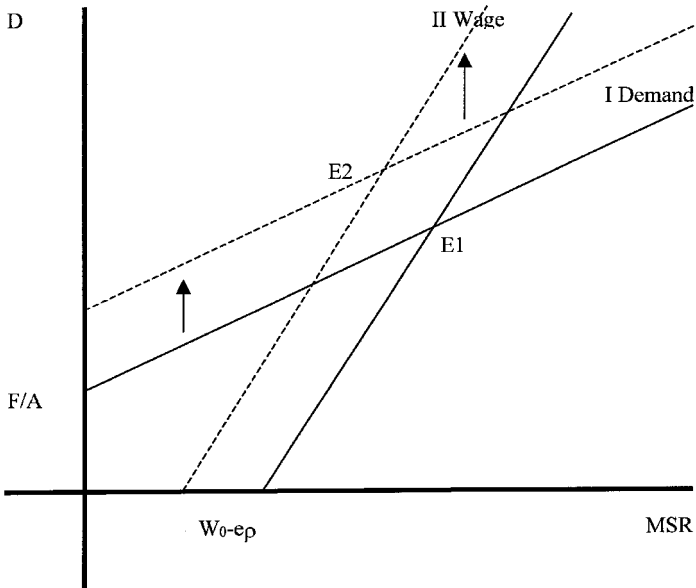
$$(III) \quad D = \frac{1}{1 - \frac{B}{A} \cdot f} \cdot \left[\frac{B}{A} \cdot w_0 - \frac{a}{A} \rho + \frac{F}{A} \right] \quad \text{with } F = c_0 + i_0 - b \cdot D_{-1}$$

In this case, we obtain the following third result.



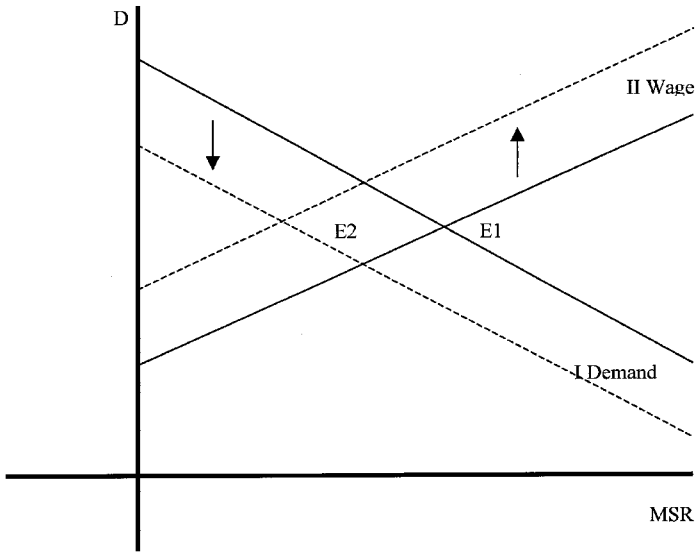
CASE 1 HYPOTHESES: moderate profit requirement, wage-earning society and few accelerator effects.

Figure 4 The case of a moderate financialization of the Fordist system



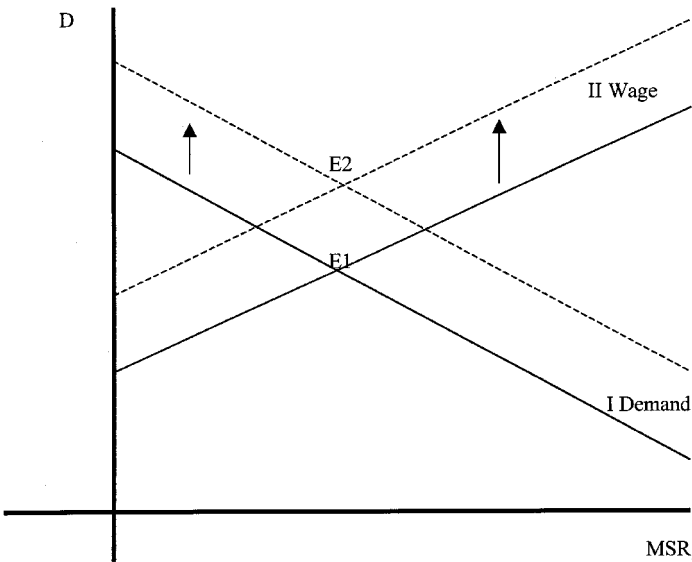
CASE 2 HYPOTHESES: higher profitability requirement, equity-based behaviour and significant accelerator effects.

Figure 5 A fully financialized growth regime



CASE 3 HYPOTHESES: limited profitability requirement, equity-based effects and limited accelerator effects.

Figure 6 A 'hybrid' financial system



CASE 4 HYPOTHESES: increased profitability requirement, wage-earning society and strong accelerator effects.

Figure 7 A paradoxical wages system

Result 3: The various configurations are valid only if the wage relation is not too competitive, that is to say, the employees' real wages are not strongly determined by the trend of demand. This result also applies to the wealth-based financial system.

However, analysis of the four configurations produces three more results.

Result 4: In each case, there is a threshold for the profitability demanded by the financial markets: a higher limit if the accelerator effects of the investment are weak and, conversely, a lower limit if they are strong. Thus a limit on the power of the financial markets is apparent; a limit which, if not respected, will introduce a series of unhealthy macro-economic effects (disequilibrium or instability, see below).

Result 5: A wage claim which raises remuneration exogenously has a positive effect on macro-economic activity only if, provided the requirement for stability is met, there is either a characteristically Fordist or a paradoxical wage configuration.

A final lesson concerns the development of the various configurations and their stability if we vary the parameters characterizing financialization, increased β and Tobin ratio with low interest rates. It can be seen from Table 3 that the Fordist system zone is reduced, while the equity-based financial system zone is increased. It is however easy to demonstrate that the zone of stability is governed by:

$$\frac{\partial H}{\partial \alpha^*} \text{ from the sign of } 1 - b - \alpha$$

An expression that is negative for the wealth-based financial sphere: the economy thus approaches the zone of instability giving rise to the sixth result.

Result 6: The development of the financial markets mechanically extends the wealth-based zone but at the same time takes the economy closer to the zone of structural instability. There is thus a threshold above which financialization destabilizes macro-economic equilibrium.

This result is especially important for interpreting the contemporary situation. The South Asian crises have focused the attention on the mismanagement and bad supervision of the banking and financial system of Korea, Indonesia and Thailand (Krugman 1998), but not of Taiwan or Hong Kong. By way of contrast, the American system displays sophisticated management techniques and supervision and this may give a false feeling of security, especially after a one-year 'flight of quality' to the Wall Street market. But the model suggests that there is a strong potential for a major financial crisis within the US, precisely because they are at the forefront of a financialized economy. And it has to be

remembered that any effective financial regulatory system tends to divert innovation into new forms of risk taking with the potential for generating unexpected new forms of financial crisis (Caprio 1999). This is the issue of systemic risk (Aglietta 1995).

What kind of monetary policies can stabilize a wealth-based system?

The assumption that the interest rate is exogenous can now be relaxed and we can then consider the stabilizing or destabilizing effects of a monetary policy whose sole objective would be to stabilize the value of financial assets related to income. We must first ask how activity changes when the interest rate varies. The question can be expressed as follows:

$$(III') \quad D = \frac{1}{1-H \cdot f} \cdot \left[\frac{B}{A} \cdot w_0 - \frac{a}{A} \rho + \frac{\bar{F}}{A} \right] \quad \text{with } F = c_0 + i_0 - b \cdot D_{-1}$$

In this way, we can assess the effects of the interest rate on demand, assimilated here in production, because:

$$\frac{\partial D}{\partial i} = \frac{\partial D}{\partial H} \cdot \frac{\partial D}{\partial \alpha^*} \cdot \frac{\partial \alpha^*}{\partial i}$$

For the sake of realism, let us suppose that this demand falls with the interest rate, although this is not a characteristic of the equity-based financial system. The problem of the interaction between monetary policy and real activity can be summarized in the new diagram operating in space defined by W/Q and i . It is fairly easy to see that the share of profit in production is equal to:

$$\frac{W}{Q} = \frac{q}{i} \left[(1-f) - \frac{w_0 - e\rho}{Q} \right]$$

The degree of sensitivity to the interest rate can be calculated from this and proves to be negative for the probable values of the parameters, due primarily to demand falling with the interest rate. That being the case, the monetary and real equilibrium can be described in the equivalent of an IS-LM model (Figure 8).

It would seem that monetary policy is a stabilizing factor only if the Central Bank has suitable reaction speed values when a speculative bubble appears, since the condition of stability can be expressed as follows:

$$\left| \frac{\partial \frac{W}{Q}}{\partial i} \cdot \frac{1}{\phi} \right| < 1$$

Which produces a final result:

Result 7: To stabilize a financial system, it is important for the Central Bank to react sufficiently quickly to prevent financial bubbles from bursting.

This new result sheds some light upon the contemporary issue of central bank independence, which is often misunderstood. For instance, a well-known economist and former Vice-Chairman of the Board of Governors of the Federal Reserve Board concludes his essay on the conduct of monetary policy with the following statement: ‘modern central banks ought to assert their independence from the financial markets just as vigorously as they assert their independence from politics’ (Blinder 1999: 75).

The question now is: under what conditions can Alan Greenspan get on with, what the financial press perceives as, the difficult but necessary task of preventing the financialized economy from being trapped by a financial bubble (*The*

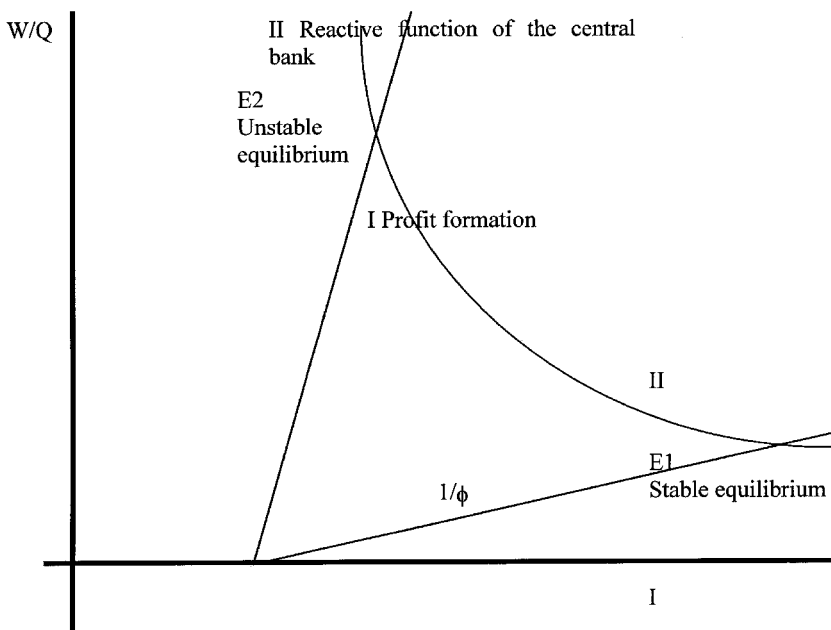


Figure 8 The compatibility of a financial system and the speed of reaction of monetary policy

Economist 1999: 15–16)? If, during the Golden Age, the central bankers tended to be captured by governments in charge of managing the Fordist capital labour compromise, in the 1990s and probably the first decade of the twenty-first century, central bankers may become the hostage of big internationalized finance as they cope with the risk of financial systemic crises. Each institutional configuration calls for a definite economic policy style, a rather useful teaching from ‘*régulation*’ theory (Lordon 1999). A finance-led regime is not at all a minor variant on a Fordist regime and the management of the central bank must be very different.

What stylized facts can this model explain?

A priori, this model is purely theoretical and describes a fully developed equity-based system that does not necessarily exist in real economies. Furthermore, analysis has resolved only its short-term properties, in a demand system with no supply constraint. It is nevertheless likely to explain some of the problems posed by the financialization of contemporary economies.

- The model first gives prominence to the question of the complementarity that exists between household behaviour, the type of employment relation, profit requirements and firm governance: all configurations do not lead to a finance-led virtuous growth system.
- A second result concerns the question of convergence of regulation methods under the impact of ‘financial globalization’. It becomes clearly apparent that in economies still dominated by wage-earning social relations, the effects can be the opposite of those observed in an economy where equity-based household behaviour prevails over utilization of income from employment. This enables the degree of heterogeneity between countries to be understood, as well as the differences between the United States and possibly Great Britain, on the one hand, and Germany and the European countries, on the other. This provides further support for the hypothesis of the persistence of different ‘*régulation*’ modes, even in the era of globalization (Berger and Dore 1996; Boyer and Drache 1996).
- Suppose that financialization has the dual effect of extending the zone of the parameters within which we can observe a finance-led virtuous system, while at the same time making departure from the zone of stability more likely. If that is true, the seeds of destabilization and major financial crisis would then be most acute in the United States. This is the opposite of what occurred in the period that began with the Asian financial crisis in summer 1997. By the end of the 1990s, the financial community’s concern or anxiety has shifted from Asian NICs to the American economy itself where the bursting of the bubble could trigger a ‘hard landing’, until now prevented by the Central Bank’s clever and lucky management (*The Economist* 1999).
- At the end of the 1990s, the majority of central banks are still concerned with issues of price and monetary stability, not only in Latin America and Asia but

also in Europe. The European Central Bank (ECB) has exhibited some concern for stimulating growth, provided that the inflation rate is kept between 1 or 2 per cent. The issue of the role of ECB in preventing the emergence of speculative bubbles is not really taken into account, maybe because the bubble is less evident in Europe than in North America (European Central Bank 1999: 15–18). Clearly, the American Central Bank seems to be an exception, insofar as the issue of financial structural stability is recognized as an implicit or even explicit objective of monetary policy. The turmoil of the summer of 1998 demonstrated once more that the market was a major pre-occupation of Alan Greenspan's management of the American system. Interest rates were lowered twice to facilitate Wall Street's recovery while, on the second occasion, price and wage indices showed more vigorous growth than anticipated. During summer 1999, in order to prevent a possible acceleration of inflation the interest rate was raised; by then the fear of Wall Street turbulence had subsided. The model suggests that this kind of policy dilemma is a typical feature of a finance-led regime.

- *A priori*, the model corresponds very badly to the hierarchy of institutional forms characteristic of Japan, where the financial markets and the central bank do not play the same role as in the US. Profit requirements are traditionally very low, industrial capital dominates over financial capital and private pension funds are under-developed. The large corporation inserted into a Keiretsu displays its own, original governance mode, traditionally immune from speculative behaviour. But the liberalization and opening of the Japanese financial market has created a new imbalance between company-based compromise and the growing pressure exerted by international financial norms (Boyer and Yamada 2000). Thus, the model does generate one interesting insight into Japan: the Central Japanese Bank's long delay in raising the governing rates during the bubble economy did have the effect of fuelling speculation on stocks and shares and fixed assets. In the same way, the slow reaction of the Japanese authorities did nothing to stop the rapid rise and fall in the value of financial assets, which partially explains the outstanding difficulties at the end of the 1990s when the problem of the banking system has still to be resolved.

From theory to the empirical: is a financialized/equity-based economy plausible?

If empirics are considered and several statistical indicators combined and then analysed in the light of the present model, it is hardly surprising to find that only the Anglo-Saxon economies are candidates for such a configuration (Table 4).

Wealth in stocks and shares in relation to households' disposable income is in fact particularly great in the United States, Canada and Great Britain. However, the phenomenon of financialization continues to be extremely limited in Europe and Japan, countries where these financial investments represent less than 30 per

Table 4 The extent of financialization in various economies

<i>Parameters</i>	<i>Countries</i>					
	<i>United States</i>	<i>Great Britain</i>	<i>Canada</i>	<i>Japan</i>	<i>Germany</i>	<i>France</i>
1 Average propensity to consume (1996)	0.95	0.926	0.956	0.869	0.884	0.908
2 Wealth in shares/disposable income (1997) %	145	75	95	30	25	20
3 Extent of capital gains/disposable income (%)	35.5	15	11	-7	7	5
4 Proportion of shares and bonds in households' financial assets	28.4	52.4	n.a.	25.3	21.3	14.5
5 Monetary market rate (%)	5.34	7.38	5.20	0.32	3.5	3.46
6 Return on bonds (%)	6.51	5.59	7.30	1.06	3.97	4.23
7 Reference profitability (%)	12-16	12-16	12-16	5	6-7	9

Sources: Line (1) Keizen Koho Center (1998: 97); Lines (2) (3) and (4) *The Economist* (1998: 129); Line (5), (6) *Japan Almanac* (1998: 26); Line (7) *The Economist* (1998: 129)

The figures relate to September 1998, unless otherwise specified

cent of income. Correlatively, it can be seen that capital gains in relation to income are significant only in the same Anglo-Saxon countries, since losses have been recorded in Japan since the financial bubble burst. Finally, the reference norm of profitability for the financial market operators continues to be much higher for the Anglo-Saxon countries than for the other OECD economies.

An empirical outcome confirms the difference between national financialization trajectories and is in accordance with the theoretical result: a similar change in the financial markets does not necessarily have the same impact on all OECD countries. But how do the empirics for different national cases relate to the mechanisms that the model brings into play?

- When the hierarchy of the average propensities to consume (line 1 of Table 4) is compared with the extent of financial equity in relation to disposable income, it is surprising to find a fairly significant positive correlation that would make a coefficient K appear of around 0.08, which is considerably higher than the valuation of around 0.04 which is frequently put forward for the United States. If only the three most financialized economies are considered, the coefficient is much more moderate and realistic (of the order of 0.03).
- The estimation of the investment functions for each country is both delicate and crucial to the identification of systems. Reference has therefore been made to the works of Bhaskar and Glyn on the one hand and those of Bowles and Boyer on the other, because both ask precisely the question about the relative intensity of accelerator effects and profit (Table 5). The comparison between the two estimates highlights the extreme fragility of the exercise, which is partially due to the notable co-linearity of the two explanatory variables over a large part of the period under review. Furthermore, the estimates were made for earlier time periods when the 1990s may have brought major changes in investment decision making: recent influences may include more concern for profitability, possible negative impact of financial indebtedness, more uncertainty about real interest rates and exchange rates. Therefore, the available estimates may undervalue the extent of current financialization.

If for reasons of coherence we adopt the Bowles-Boyer estimates, which are the only ones to provide assessments for both consumption and investment, the parameters of the model can then be calibrated (Table 6).

These results, which are preliminary in the extreme, produce a few surprises. It is true that the United States displays a profit-led demand system that appears to be stable, but Great Britain would still fit the Fordist configuration until the middle of the 1980s (the estimates actually relate to the period from 1953 to 1987, which does perhaps explain this paradox). But it is astonishing to note that Japan would be an exemplary case of the finance-led virtuous system, which totally contradicts the structural data of Table 4. The same would be true of Germany and France, which is one more paradox.

It is useful to reflect on the results which illustrate the properties and indeed the limitations of the model.

Table 5 Some investment econometric estimates

<i>Parameters</i>	<i>Country</i>					
	<i>United States</i>	<i>Great Britain</i>	<i>Canada</i>	<i>Japan</i>	<i>Germany</i>	<i>France</i>
<i>Bhaskar and Glyn</i>						
• Inertia	0.906	0.709	–	0.720	0.596	0.827
• Proportion of profit	0.010	0.003	–	0.011	0.008	0.002
• Accelerator	1.750	0.486	–	1.244	0.563	0.462
<i>Long-term coefficient</i>						
• Profit	0.106	0.010	–	0.040	0.020	0.010
• Accelerator	18.60	1.67	–	4.44	1.39	2.67
<i>Bowles and Boyer</i>						
• λ (inertia)	–	–	–	0.53	0.37	0.68
• i_r (profit)	0.16	0.14	–	0.25	0.21	0.08
• i_h (profit)	0.13	0.33	–	–	0.13	0.17
<i>Long-term coefficient</i>						
• $i_r \rightarrow a$	0.16	0.14	–	0.53	0.33	0.25
• $i_h \rightarrow b$	0.13	0.33	–	0	0.21	0.53

Table 6 A calibration of the model

<i>Parameters</i>	<i>Country</i>					
	<i>United States</i>	<i>Great Britain</i>	<i>Canada</i>	<i>Japan</i>	<i>Germany</i>	<i>France</i>
3 Propensity to consume (1996)	0.89	0.90	–	0.85	0.94	0.82
4 Sensitivity of investment						
• To profit a	0.16	0.14	–	0.53	0.33	0.25
• To demand b	0.13	0.33	–	0	0.21	0.53
5 $\alpha^* = \beta \cdot q/i+a$	1.01	0.62	–	11.6	1.22	1.21
6 System	Profit effect	Wage effect	–	Profit effect	Profit effect	Profit effect
7 $1 - \alpha^*$	0.01	0.38	–	–10.6	–0.22	–0.21
8 Overall configuration	Case 2 virtuous	Case 1 Fordist	–	Case 2 virtuous	Case 2 virtuous	Case 2 virtuous

Sources: Lines (1) and (2) Bowles and Boyer (1995); Line (3) of previous table, supposing that q is assessed on the basis of line 3 of this table

- At a first level, the reader is struck by the weakness of the profit effects on investment, which may have accumulated over the last ten years. We can confirm that the uncertainties about the effects of wealth are not likely to reverse the results when, for example, coefficient β is increased from 0.04 to

0.08. On the other hand, if we assimilate the monetary interest rate at the rate which has been used to calculate stock-market values, that does have disastrous consequences in, for example, the Japanese case. One could devise a supplementary equation linking the monetary interest rate to the long-term rate of return. In brief, the first way of *improving the model* is to apply marginal changes both to the estimates and to the basic equations in order to obtain systems which are intuitively more plausible.

- But, at a second level, questions must be asked about the applicability of such a theoretical model to economies where we know that the mode of regulation is not (yet) dominated by finance, and is much more dominated by the inertia effects associated with the crisis of the previous model. If we take the example of Japan and observe the hierarchy of the institutional forms and the players who are explicit or implicit in Figure 3, we are not surprised to find that the Japanese economy displays almost none of these characteristics. If, for example, households do not reflect wealth changes in their consumption behaviour, or if the central bank continues to have a Keynesian orientation, then the model's most fundamental assumptions are invalid. If this is the case, it is not surprising that the calibrated model produces surprising results.
- Basically, only the convergence of an institutional analysis and of an econometric analysis entitles us to form a conclusion about the existence of such a regime which requires positive answers to two questions: first, is there any direct evidence about the domination of a financial norm over all other institutional forms? Second, do the parameters fit into the zone of a stable finance-led regime? Thus, the apparent mystery of the Japanese configuration can be explained.
- Last but not least, the diversity of '*régulation*' modes among developed countries has to be taken into account. Furthermore, there is not necessarily any continuity between the speculative period and the subsequent bursting out of the bubble. In a sense it is useful to provide an interpretation of the role of the Japanese Central Bank policy at the end of the 1980s and to compare it with the current dilemma facing the American authorities. In both cases, they see it is necessary to keep speculation under control but fear that a significant upward movement of the interest rate may have possibly negative consequences upon macro-economic activity.
- To gain a better idea of the extent of the potential problems and emerging contradictions, the reader should compare Figure 3 with Figure 9, which has been devised to relate to the Japanese economy of the 1990s. A key point of reference is Irwin Fisher's somewhat neglected article about the deflationary spiral in the US from 1929 to 1932 (Fisher 1933). Of course, the context is different and the monetary authorities have learnt about the dangers of a deflationary policy, but some common mechanisms are operating (Boyer 1988).

This discrepancy between institutional and econometric analyses is an invitation to further development in the modelling of a finance-led regime.

financial positions of indebtedness. This why so many models formalize the relation between real asset prices, credit and stock-market prices (Aglietta *et al.* 1995; Artus 1998, 1999b). Some formalization of this kind would be a necessary extension of the present model and such a blending of regulationist hypotheses for the real side of economic activity, with a precise formalization of credit and asset pricing, has already been tried with some success (Brossard 1999). Credit is the missing link between monetary policy and the macro-economic level. Incidentally, it is the reason why a shaky financial system may impair the degree of freedom of central bank monetary policy. Of course, this makes the macro-economic model much more complex but so much more relevant!

- The micro foundations of an equity-based macro model must be clarified, since the behaviour and objectives of money and investment managers play an important role. Basically, the competition between the managers of pension funds may lead to a shift towards more risky assets, encouraged by the process of benchmarking managers' performance (Artus and Debonneuil 1999; Artus 1999a). Thus the economy may enter into a zone of systemic instability where the collective supervision of the central bank and assessment of the total risk may be necessary, just as the system may need a lender of last resort, with all the associated moral hazard problems. Such an analysis is beyond the scope of the present model but it is absolutely necessary in order to legitimate some of the hypotheses required at the macro level. This opens up an ambitious programme for '*régulation*' theory and heterodox thinking (Orléan 1999).
- A more disaggregated analysis would be welcome in order to assess the consequences of financialization for the social structures of contemporary economies. Fordism had the ambition to homogenize life-styles and thus promote a stable social and economic hierarchy. By way of contrast, an equity-based regime gives a premium to those social groups able to benefit from asset price increases, whereas less privileged groups have access only to unstable jobs and poor wage income. There seems to be some correlation between the deepening of income inequalities and the diffusion of finance among market-led economies (Freeman 1998). Clearly, studies of the US (Lazonick and O'Sullivan 2000) and the UK (Froud *et al.* 1998, 1999) both suggest that income and wealth inequalities are exacerbated by the diffusion of financialization. Even from a macro-economic point of view, this might be important, since the benefits and the risks of financial speculation may be concentrated on a key group of households. Therefore, a purely macro-economic analysis may underestimate the systemic instability associated when holdings of wealth, credit and futures are concentrated upon a limited fraction of the population.
- The closed economy hypothesis is not satisfactory in the era of financial globalization. Every national economy, outside the USA, has to take into account the financial rate of return obtained in other economies, since the inflow and outflow of capital play a major role in the viability of an exchange-rate

policy and the assessment of the credibility of a national economic policy. The succession of financial crises in Mexico, South Asia, Russia, Brazil and so on clearly shows the international propagation of financial norms; it also establishes the need to include foreign relations in terms of trade, direct and portfolio investment inside a more satisfactory model. Even the USA cannot be formalized as an isolated, closed economy since the USA's large and long-lasting external trade deficit has been financed by the excess savings originating from Japan, Asia and Europe. Adding such relations would make the model much more complex. Ideally, one could conceive a multinational model with a low saving-rate economy (the US) interacting with a high-saving economy (Japan) and look for the structural conditions that warrant a long-run stability. The aim of the model presented was much more modest: to design the prototype of an ideal '*régulation*' mode which could be contrasted with the typical Fordist configuration.

An impressive research programme indeed! For '*régulation*' theory the challenge is thus to try to determine the roots of the next structural crisis of this emerging growth regime; and to do so before the eruption of a major financial crisis which would demonstrate the structural limits and inner contradictions of such a regime.

Conclusion

For the time being, the model sketched in this article aims only to provide a cognitive map and a simple representation of a highly complex process. The reader is offered three provisional conclusions:

- Contrary to a widely diffused belief, the main source of major financial crises may not be NICs that suffer from bad financial and banking supervision and weak surveillance from international organizations. From 1997 to 1999, all actors on financial markets have clearly perceived this NICs risk and, accordingly, raised their risk premium, while public authorities have undertaken ambitious reforms in order to assess more correctly the financial risks and tried to develop instruments in order to reduce such risk. Thus, a major lesson of the model is that the major current risks seem to be observed in the US. The more extended the impact of finance over corporate governance, household behaviour, labour-market management and economic policy, the more likely is an equity-based regime to cross the zone of structural stability. The next act of the financial drama may well start on Wall Street!
- Outside the US, many governments may be tempted to import quickly the core institution of an equity-based economy, which in turn requires the adoption of the range of institutions that are typical of a market-led capitalism. If they hope that their economy will earn the same returns as the US or UK,

this may involve a fallacy of composition. Of course, both these national economies are market led and strongly specialized in international financial intermediation, but the asymmetric role which the US and UK play in such a process of intermediation cannot be easily reproduced by simply importing labour-market flexibility, a slimming down of public expenditure and welfare. Basically the American economy, right up to the present day, benefits from this asymmetry which cannot be reproduced elsewhere. History has produced a world configuration where the US plays an hegemonic role both in terms of economic organization and financial intermediation at the world level. But such a correlation is not easily constructed outside North America, precisely due to a strong past and path dependency. Therefore governments should be careful when they try to mimic American institutions. The process of institutional hybridization seems much more promising.

- Finally, there are strong differences between the theory of an ideal and hypothetical equity-based regime and the historical evidence about the so-called American 'new economy'. The model's disappointing results can be explained if we survey the structural transformation observed since the mid-1970s in most advanced economies and especially in the US. First, the monetarist counter-attack has meant the breaking-down of the Fordist capital-labour compromise and the beginning of a large decentralization and individualization of labour contracts and wages. Then the opening of the domestic market to foreign competition has induced erosion of the previous forms of oligopolistic competition, that in turn has challenged the viability of the previous wage-labour nexus. The emergence of large and long-lasting public deficits has developed broad and deep financial markets that have called for a liberalization of international saving. Therefore, during a subsequent period, financial deregulation and globalization have had the leading role in promoting the interest of creditors and of shareholders. The equity-based economy is the last and more recent stage of this process which took nearly a quarter of a century to affect the industrial, social and political structures of the US drastically. Consequently, it may be erroneous to attribute exclusively to finance all the interdependent and complementary transformations which took place in the hierarchy of institutional forms. The new economy is simultaneously more reactive to competition and product differentiation, based both on high tech and the extension of services to consumers, and, last but not necessarily least, governed by the impact of the shareholder's power and objectives.

It is especially difficult to combine theory and history. In the 1970s, early regulationist research took up this challenge when it tried to understand the emergence, rise and demise of the Fordist growth regime. For the first decade of the twenty-first century, the equity-based regime poses a similar challenge: when its success will unfold into a major structural crisis and that will be the starting point, form and diffusion of crisis.

References

- Aglietta, M.** (1976) *Régulation et Crises du Capitalisme*, Paris: Calmann-Lévy.
- (1995) *Macroéconomie financière*, Paris: Collection Repères, La Découverte.
- DD** (1998) 'Le capitalisme de demain', *Note de la fondation Saint-Simon* 101 (November).
- and **Mendelek, N.** (1987) 'Pourquoi et comment renouveler les objectifs et les règles du SME', *Économie et Prospective Internationale* 32(4): 43–73.
- , **Coudert, V.** and **Mojon, B.** (1995) 'Actifs patrimoniaux, crédits et économie réelle', *Cahiers économiques et monétaires*, Paris: Banque de France.
- Amable, B., Barré, R.** and **Boyer, R.** (1997) *Les systèmes d'innovation à l'ère de la globalisation*, Paris: Economica/OST.
- Artus, P.** (1998) 'Peut-on expliquer les évolutions du rendement du capital, de la dette des entreprises, des cours boursiers, de l'investissement et de la dette extérieure aux États-Unis', *Document de travail Macroéconomie*, 1998-32/MA, December.
- (1999a) 'Exigence de rendement des fonds de pension: quels effets sur l'efficacité et la stabilité de l'économie?', *Document de travail Macroéconomie* 1999-33/MA, February.
- (1999b) 'Effet de levier, risque, rendement des actions et cours boursiers', *Document de travail Finance et Économétrie Financière* 1999-10/FI, July.
- and **Debonneuil, M.** (1999) 'Crises, recherche de rendement et comportements financiers: l'interaction des mécanismes micro et macroéconomiques', *Conseil d'Analyse Économique* 18, Paris: La documentation française, pp. 55–96.
- Berger, S.** and **Dore, R.** (eds) (1996) *National Diversity and Global Capitalism*, Ithaca, NY: Cornell University Press.
- Bertrand, H.** (1983) 'Accumulation, régulation, crise: un modèle sectionnel théorique et appliqué', *Revue Économique* 34(6).
- Blinder, A.** (1999) *Central Banking in Theory and Practice*, Cambridge, MA: MIT Press.
- Bowles, S.** and **Boyer, R.** (1995) 'Wages, aggregate demand, and employment in an open economy: an empirical investigation', in G. Epstein and H. Gintis (eds) *Macroeconomic Policy after the Conservative Era*, Cambridge, MA: Cambridge University Press.
- Boyer, R.** (1988) 'D'un krach boursier à l'autre: Irving FISHER revisité', *Revue Française d'Économie* III(3): 183–216.
- and **Didier, M.** (1998) 'Innovation et croissance', *Les Rapports du Conseil d'Analyse Économique* 10, La Documentation Française, Paris, pp. 11–132.
- and **Drache, D.** (eds) (1996) *States Against Markets: The Limits of Globalization*, London and New York: Routledge.
- and **Durand, J-P.** (1997) *After Fordism*, London: Macmillan Business.
- and **Juillard, M.** (1995) 'Les États-Unis, adieu au fordisme!', in R. Boyer and Y. Saillard (eds) *Théorie de la régulation: L'état des savoirs*, Paris: La Découverte.
- and **Saillard, Y.** (eds) (2000) *Regulation Theory: The State of the Art*, London: Routledge.
- and **Yamada, T.** (eds) (2000) *The Japanese Capitalism in Crisis: A Regulationist Interpretation*, London: Routledge.
- Brossard, O.** (1999) 'Instabilité et régulation des économies monétaires: le rôle des facteurs financiers', Thèse de Doctorat, Université Paris X-Nanterre.
- Caprio, G.** (1999) 'Beyond the capital ideals: restoring banking stability', Washington, DC: World Bank Mimeograph.
- The Economist* (1998) 19–25 September: 129.
- DD** (1999) 'Trapped by the bubble', 25 September: 15–16.
- European Central Bank** (1999) *Monthly Bulletin* August, Frankfurt: ECB publications.
- Fisher, I.** (1933) 'Une théorie de la déflation par la dette' (traduction française et réédition), *Revue Française d'Économie* III(3), 1988.
- Freeman, R.** (1998) 'Le modèle économique américain à l'épreuve de la

comparaison', *Actes de la Recherche en Sciences Sociales* 124 (September).

Froud, J., Haslam, C., Johal, S., Leaver, A., Williams, J. and Williams, K. (1998) 'Accumulation based on inequality: a Keynesian analysis of investment for shareholder value', paper presented at the 20th Conference of the International Working Party on Labour Market Segmentation, Arco/University of Trento, July.

Froud, J., Haslam, C., Johal, S. and Williams, K. (1999) 'Restructuring for shareholder value and its implications for labour', paper presented at the Social Justice and Economic Efficiency Conference, University of Cambridge, April.

Japan Almanach (1998) Tokyo: Asahi Shimbun.

Jürgens, U., Naumann, K. and Rupp, J. (2000) 'Shareholder value in an adverse environment: the German case', *Economy and Society*, 29(1): 54–79.

Keizen Koho Center (1998) *Japan 1998: An International Comparison*, Tokyo: Keizen Koho Centre.

Kindleberger, C. (1978) *Manias, Panics, and Crashes: A History of Financial Crises*, New York: Basic Books.

Krugman, P. (1998) 'What happened to

Asia?', www.mit.edu/people/krugman/index.html, January.

Lazonick, W. and O'Sullivan, M. (2000) 'Maximizing shareholder value: a new ideology for corporate governance' *Economy and Society* 29(1): 13–35.

Lordon, F. (1999) 'Croyances économiques et pouvoir symbolique', *L'Année de la Régulation* 3: 169–210.

Majnoni d'Intignano, B. (1999) 'Egalité entre femmes et hommes: aspects économiques', *Conseil d'Analyse Économique* 15, La Documentation Française, Paris.

Morin, F. (1998) *La rupture du modèle français de détention et de gestion des capitaux: analyse, prospective et comparaisons internationales*, Paris: Editions de Bercy.

OCDE (1999) 'L'économie fondée sur le savoir: des faits et des chiffres', Réunion du Comité de la politique scientifique et technologique (GPST) au niveau Ministériel, OCDE, Paris 22–3 June.

Orléan, A. (1999) *Le pouvoir de la finance*, Paris: Edition Odile Jacob.

Petit, P. (1998) 'Formes structurelles et régimes de croissance de l'après fordisme', *L'Année de la Régulation* 2: 169–98.