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**Alternative Solutions for
Coherent Financial
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The corporate governance of banks: alternative solutions for coherent structures and control

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"One may be bothered by the apparent decrease in the predictive power of theoretical analysis in a setting that stresses interdependence rather than incentives. Perhaps though this decrease in predictive power should be seen as a chance to come to terms with the great heterogeneity of financial systems that we observe, in particular with the contrast between bank-oriented systems of finance in some countries and market-oriented systems in others." (Hellwig 1989, p. 284)

1. Introduction

The corporate governance of banks has received far less attention so far than that of non financial firms (Prowse, 1995). Of the possible explanations for this, two seem to be the most relevant: the first is that the governance structure of banks (hereafter GS) has quantitative and not qualitative specificities, compared to those of non financial firms, while the second is the existence, until recently, of a reassuring state intervention.

The last few years have seen considerable changes in the latter, at least as far as statements of intent go. There has been a move towards a system of prudential regulation from one of structural regulation, in which the state offered both implicit and explicit guarantees to creditors and shareholders, even becoming owner-guarantor. The new system should limit public intervention dictate objective, non-discriminatory rules to reinforce the system and at the same time enable the public sector to divest itself of crisis management. In some countries, Italy in particular, there is a trend towards a generalised model of private ownership of banks.

Most of the literature on the GS of banks starts from the point of view of the individual institution. It examines the specificity of banks and how this reflects on the specificity of their GS. This research however, presupposes a rather generic type of banking firm, while the conclusions seem to diverge as a result of not always explicit and precise reference to distinct financial system to which banks belong. This type of literature has few links to financial historical research as the latter deals with the relationship between the

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structure of financial systems and the nature and speed of the accumulation processes of real capital.¹

In the past, studies of financial history and the theory of financial systems have emphasised the culmination of processes of development in a financial structure that, as in traditional theory, centred round the full development of markets. The heady days in which processes of securitization were interpreted as heralding the definitive start of market supremacy and the disappearance of banks are still relatively recent.

According to the most recent developments in the micro analysis of market failures - based on incomplete contracts, transaction costs and information-, firms are no longer thought to have the anonymity of black boxes and have become the means to tackle or reduce the impact of those failures. In this framework the explanatory pendulum has swung to the opposite extreme, with numerous theoretical and comparative studies tending to demonstrate the superiority of economies with financial systems based on intermediaries (Germany and Japan) compared to economies with market oriented financial systems (United States and the U.K.).² This swing of the pendulum has left unaltered the sharp contrast between the two models and also the hypothesis of the absolute superiority of the one over the other. This reinforces any difficulties in accounting for the non-subordinate co-existence of the two types of financial circuit - the banking and the market one.

A recent paper by Franks and Mayer³ takes a less rigid approach. According to it, the bank centred system is compatible with economies based on mature industries, while the market centred system favours innovative industries. Allen (1993), in part, comes to similar conclusions, based on the hypothesis that banks, in contrast to markets, do not carry out repeated evaluations, so that their superior allocative power manifests itself with well known technology and when a wide consensus exists about what management should do. Over and above the impact of their results, the merits of these researches lie in tracing a link between the structure of the financial system and the dynamic characteristics of the productive system.

The co-existence of the two financial circuits may be partly explained following the so-called lending view. This assumes that the capital market produces significant failures for smaller firms, which, as a consequence, can find finance only within the banking circuit.⁴ Taking this theory to its logical

¹ Hellwig (1991) gives a useful synthesis of historical and theoretical research.

² See for example Cable (1985), Mayer (1988) and Stiglitz (1985).

³ Franks and Mayer (1992) cited in Prowse (1994) p. 67 n. 88.

⁴ This approach, common to much of the literature on the theory of intermediation, somewhat ahistorically views the banking circuit as a completion of the financial system made possible by the inefficiencies of

conclusion, any polarization between financial systems would be the result of economies specialised in large or small firms. However, this result, like many of the previous ones, has dubious empirical implications if we want to generalise them.

Little attention, however, has been paid to bank GS in this type of literature since the prevalent focus seems to be that of the control exercised by banks on non financial firms.

As Hellwig states in the passage cited at the beginning of this article, formal analyses find it difficult to explain the heterogeneity of existing financial systems, depicted in general as a polarization between bank centred and market centred systems. The present analysis, taking up a wide variety of suggestions from the existing literature, attempts to offer a non formal analysis of alternative financial systems defined in terms of the coherence between their constituent parts. It is based on the conviction that, even at the theoretical level, there is not only one model of bank or market. Moreover, abandoning the partial analysis typical of that type of approach, permits us to examine a "combination" of various models of bank and market in terms of the coherence of the resulting financial system.

Thus in section 2 we present three different models of coherent financial systems characterised by three distinct types of bank. Their comparison helps to clarify both the contrast between bank centred systems and market centred systems and the need to emphasize the specificities of each alternative coherent financial system rather than those of banks. The differences between these financial systems increase when we take into consideration typologies of regulation and of central banking that are coherent with each system (section 3). Considering complex structures consisting of banks, markets, central banks and regulations, seen as coherent systems, the analysis of bank GS can be compared with the general problems of GS; as we will see, the optimal solution is not unique (section 4). If we proceed from an analysis of closed systems to an international one with a certain degree of competition and integration between distinct financial structures, two problems emerge: exposure to a uniform regulatory mechanism and the survival capacity of each type of financial system in a complex environment characterised by heterogeneity. Incoherence and instability in financial systems and in the management of monetary policy are the possible result (section 5). Finally the conclusions offer some reflections on the current Italian financial system, both from the point of

the capital market. With no failures and imperfections a structure comprising only the capital market is considered the Pareto optimal solution.

view of the ownership structure and from that of the coherence of the changes underway.

As is usual in this type of literature, we will assume the existence of incomplete contracts, transaction costs, including information costs, and asymmetric information. We shall also make the assumption (less frequently encountered in the literature) that the economic system as a whole suffers from incomplete information, especially about the future. As a result, even if transaction costs were eliminated and asymmetric information completely overcome, the problem of market failures would remain. The presence of uncertainty at a systemic level makes the presence of a perfect information "technology" in both markets and intermediaries impossible.

The purpose of this article is not to present "strong" results. As Keynes said, theory, whether good or bad, has a significant influence, at least in the long run, on those responsible for economic decisions in both the public and private sector, but this paper more modestly attempt to weaken some of the certainties that seem to prevail today.

2. Coherent financial structures

It well known that US, German or Japanese banks are different both from a structural and operational point of view and as regards their place within the financial system. The general description of capital markets is just as schematic because it can refer to impersonal markets or to the complex of the financial firms which give it form and operativity. How can the distinction between the bank centred system and the market centred system be given an unambiguous meaning?

Let us try to construct a schematic outline of three types of financial system based on three types of banks, ignoring for the time being the public sector in the form of the central bank and the regulatory system.

The first type includes relationship banks (hereafter RB) which are tied to firms through long-term, stable, and complex customer relationships. The RB internalises the market on the basis of better information, economies of scale and diversification given by the complex of those relationships. In a long-term perspective and as an insider, it offers the firms debt contracts and holdings, that help to maintain customer relationships. These are centred on commitments fostering the continuity and the conditions of the relationship and are linked to a wide range of services. Among the latter the private production and provision of micro and macroeconomic information is by no means

secondary.⁵ The pricing is consistent with this overall operative structure geared to long-term relationships. The profitability of the RB is linked to the high volume of the risk complex it internalises, in addition to services. The capital market serves to finance part of its liabilities, to keep financial leverage high and limit the concentration of credit. However, the RB must maintain a dominant position with respect to the market, mainly in order to render the market pricing system coherent with its own and to defend its customer relationships. This dominance of the RB means that it manages to incorporate its customer relationships in an allocative reputation which is sufficiently valued by the market in terms of pricing.⁶ It thus internalises most of the functions which, according to the literature, characterise non bank intermediaries and the market, including changes in firm ownership. Its wide network and necessary expertise require a human capital which constitutes both a significant part of the running costs and an engine of profitability.⁷ From this perspective the capital market should be seen as a functional complement to the RB. In fact, this type of bank enjoys all the positive attributes ascribed to it by transaction cost and asymmetric information analysis. Moreover, it is also an important agent for the reduction of systemic uncertainty. The risks of the whole financial system are concentrated in the RBs. The coherent diagram for this RB dominated financial system is given in fig.1 where the signs + and - show the net surplus and deficit positions, bold represents the dominant part and the double arrow indicates the direction of command.

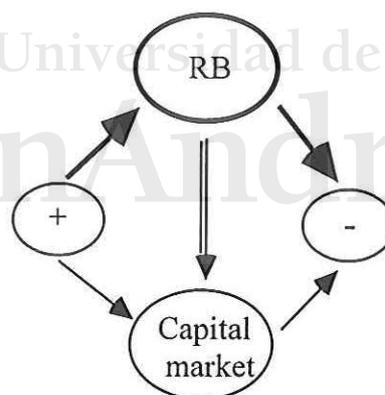


Fig. 1

⁵ With reference to the German system, Hellwig (1991) proposes an extremely interesting argument. He emphasises the supply of information from banks to non financial firms, showing the existence of an information asymmetry opposite to that normally analysed. Considering that the system suffers not only from information asymmetries but also from incomplete global information, the role of the producer of micro and macro information and its personalisation assigns an important informational role to this bank.

⁶ If the RB were subject to the discipline of an independent market it would become a bank belonging to one of the other financial system models described later, since it could not express an independent pricing based on long-term customer relationships. The only possibility would be a market which produced the same evaluations as the RB. Since these result from relations which are not replicable in an independent market, this solution is not possible.

⁷ See footnote 20 and the equation to which it refers.

The second type of financial system includes the insurance bank (hereafter IB). This type of bank tries to maximise and diversify the volume of business in debt contracts. It does not employ significant resources in the evaluation and control of clients, relying on the minimisation of risks through diversification with a preference for collaterals and multi bank borrowing by single firms. Typical of this bank are relations with debtors, which though non casual, lack commitment and, as a consequence, a stable customer relationship. The IB offers economies of transaction costs (in a differentiated portfolio) on a par with any "big creditor" (such as a bond investment fund) and therefore equal to the market. As a complete outsider its screening and monitoring operations are inferior to those prompted by the market. It can, however, specialise if it finds a niche in the short-term segment and the payment system where information problems are fewer and the economies from belonging to a co-ordinated system may be greater.

The IB is characterised by its provision of a better insurance scheme than the market: when final creditors turn to the market they have firm capital as their ultimate guarantee, when they turn to the banks they have also bank capital and possible extra firm collaterals.⁸ Moreover, its sight fixed value liabilities constitute a further insurance for the depositor, shifting liquidity and interest (or market) risks from these to the bank. With respect to the market (including non bank financial firms) its existence depends on the comparison between its intermediation costs and insurance benefits, which may however be influenced by a lower level of information "technology". It follows that, on the asset side, market pricing must be accepted, while on the liability side it can rely on a mark down with respect to equivalent market rates proportional to the value of its insurance policy.

Furthermore the IB can profit from possible partial market imperfections - for example if the small and medium sized firms find it too costly to enter and remain in the market. In this case it takes further advantage by imposing a mark up on this type of asset which is useful to compensate for its information inferiority in the face of incomplete differentiation and undiversifiable risks. The funds it can count on to fuel its assets depend, on the deposit side, on the space left to it as insurer, and, on the market side, on how much the latter puts at its disposal in the form of loans and capital. The completion connection is the reverse of that of the RB; the IB constitutes the market completion; to what extent depends on how much this suffers from high instability (which causes a

⁸ Credit seniority is not taken into consideration.

high demand for insurance on the part of savers) and, in some cases, from high transaction costs. The market finds itself in a dominant position in this system and uses it according to its degree of efficiency (fig. 2). The undiversifiable risks are now felt more on the units in surplus.

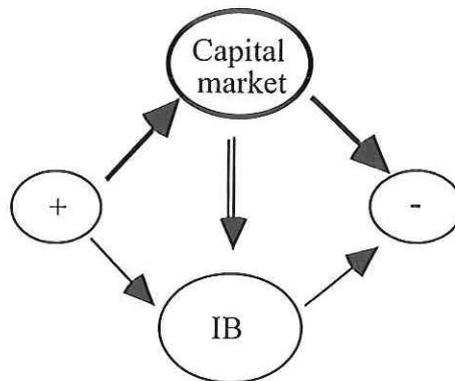


Fig. 2

The third type of financial system includes the securitised bank (hereafter SB).⁹ This bank is specialised, either in the asset and/or liability side, in the supply of services. It is capable of subdividing a transaction in different assets related to the single risks it is composed of (including credit risks). It takes on risks only in the size and quality it desires, through market securitization and hedging transactions and makes profits from the remuneration of services and residual risks it accepts. It can present part of its liabilities at fixed value since it is able, if it so wishes, to cover interest and liquidity risks on the market. This type of bank lives off the market, is part of it, and in fact is one of the satellite institutions which make the market more efficient and powerful (see fig.3 where the broken line arrow indicates the services undertaken for firms).

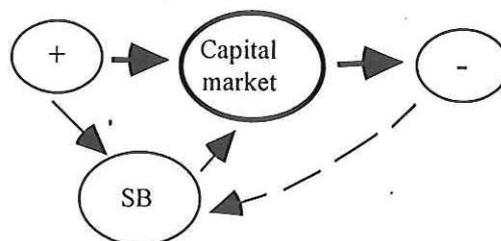


Fig. 3

⁹ This definition does not correspond exactly to the transactions bank in Meerscham (1991) and Rajan (1992).

The preceding analysis of coherence has, in fact, residually defined the capital market. In the first case we have the rather limited residual market dominated by the RB which incorporates most of the functions and societal forms which are, on the contrary, distinct in the other models. In the second case and above all in the third, we have a large market characterised by a series of satellite financial firms which are complementary and enhance its efficiency.

The RB seems to be the only type of bank able to characterise a genuine bank centred system. On the contrary the SB, together with institutional investors, helps to define a market centred system. The IB can not characterise a financial structure. It may be a part of a system with a strong component of banking intermediation but only as a result of the defects of the market itself. The coherence of this model requires that a limit be posed to the weakness of the market, related to its capacity to dictate a reference pricing and exert, as we shall see later, a minimum control over firms. This model is perhaps the easiest one to put into practice since its components need to be less specific, but it is at the same time more unstable, just because it is less decisively coherent.

The previous "pure" models form a radical abstraction, since the characteristics attributed to each of them are found in real bank structures not so neatly separated. On the strength of the preceding arguments the IB and SB types are those which can be most easily "mixed". When dealing with pure models of the financial system, the greatest simplification lies, however, in not considering the coexistence of several types of bank, i.e. the presence of a level of specialisation in banking intermediation. The previous analysis should then be considered in terms of a dominant model which commands a specific type of general coherence.¹⁰ It must also be noted that one of the aims of this analysis is to argue that reality does not generally present fully coherent structures.

One result of the preceding analysis is to shift the discussion on specificity from the single undifferentiated institution to the financial system as a whole. The literature has often raised the problem of whether the banks are special, concentrating on bank assets and/or liabilities with significant differences in approach. The following features characterise them: bank debt is dispersed and generates the creation of liquidity; the relation between debt and capital is much higher for banks than for non financial firms; bank debt is

¹⁰ The role of most banks in the payment system, from which the characteristics already noted and some specificities at the base of their power with respect to the market derive, is not taken into consideration. However, I do not intend to enter into the discussion whether it is necessary to attribute this role to the banks.

explicitly or implicitly insured; bank assets are non tradable and hard to evaluate; bank solvability is crucial to the payment system; banks are heavily regulated, particularly as regards takeover bids and limits on ownership structure.¹¹

We will concentrate initially on those specificities which are free from implicit or explicit forms of state interference. Since this analysis is mainly normative, our starting point is that the specificities are tied to the functions fulfilled by the financial system as a whole. The latter must put surplus and deficit positions in communication and attempt to create compatibility between different needs and preferences while distributing risks optimally. Moreover, it must create the financial instruments required for economic growth. To do this it must provide economies of transaction and agency costs, create liquidity, offer firms opportunities for financial leverage, produce and disseminate information, provide insurance coverage, render the ownership of firms fluid with respect to management, and ensure control over firms. Whether the comparison with non financial firms and sectors leads to single out specificities that are qualitative or only quantitative is not crucial in this analysis. The problem is how these functions are fulfilled, how risks deriving from the real sector are dealt with, how to reduce the perception of them, improve their distribution and try, at the same time, not to create new ones.¹² If we look at the financial system as one of the sectors of the economy, one of its important qualitative specificities lies in the systemic repercussions of its operations and failures, which make it close to being a public good.

Assuming that the different types of financial system described above provide these services globally, they divide them differently according to their constituent parts. The differences in division due to the distinctive nature of banks and markets can influence the overall efficiency related to the different functions.

In the first model most of the functions are carried out by the RB itself. It delegates only what is functional for its own operations or what is inevitably done more efficiently by the market and the specialised banks. All the quantitative and qualitative specificities of the financial system are incorporated in the RBs and the overall efficiency of the financial system depends on that of the RB.

In the second model the IBs share the general functions in a residual form with the market. This takes the form either of a quota or of a specialisation

¹¹ See among others Goodhart (1989), Prowse (1995) and Tirole (1994).

¹² This refers to hypotheses, like Minsky's, on the creation of financial fragility and the endogenous production of financial instability.

in, for example, the short term or the small and medium firms segments. We can speak of bank specificity inside the financial system because the IB has distinct contractual forms (typically in debt on the asset and the liability side) and therefore in the typology of risks that are taken on.

In the third model the SBs are part of the market and are not specific with respect to it.

3 Macroeconomic environment, the central bank and regulation.

The types of financial system described obviously benefit from operating in an economic environment with stable growth, in the first place because this means the reduction of undiversifiable risks. Less obvious however, is the question whether the degree of resilience of the different systems is different when confronted by an external disturbance, and whether their capacity to create endogenous sources of instability is different.

With reference to exogenous shocks the answer basically depends on the degree of absorption of the shock on the part of those who have accepted the risk and from the negative externalities which stem from their reaction to the event.

In the model based on the RBs, weak and short shocks can be absorbed without producing notable externalities. Given their propensity to long termism, these banks, on the contrary, isolate firms from temporary negative events. Longer and more consistent shocks instead, fall on a dangerous concentration of risks, multiplying the effect they produce directly on the real system through this type of banking system. The RB must therefore be well stocked with free capital so as to absorb shocks with limited effects and must operate by avoiding short-term interference in their management as much as possible. Long and strong shocks can not, however, be faced without jeopardising the entire financial system. This should lead to economic policies geared to containing the effects of shocks on the economic system both in their length and strength. The central bank must place itself at arm's length, pursuing policies geared to stability but without providing explicit or implicit forms of insurance (which could have speculative implications given the control of the RBs over the capital market). When badly needed, the central bank's intervention would be too vast not to explicitly require the taxpayer's money.¹³ The regulatory system is of great importance. On the one hand it must push the RBs to take full advantage of their positive potential - for example with

¹³ In this context therefore, there is not much point in justifying central bank lending of last resort to banks too big to fail.

commercial law norms designed to reduce information costs and encourage their function of control over firms- on the other it must force them within the confines of safe and sound banking through a set of fixed rules (limits to maturity transformation, to credit concentration, to participation in risk capital of non financial firms, minimum capitalisation coefficients etc.). At the same time it must encourage forms of self regulation for the management of the payment system and the capital market, dominated by the RB.

As to the IB model, the exogenous shocks are divided directly between the banks and the market. The larger the IBs' share the more the same arguments used for the RBs can be reiterated, albeit less forcefully. Given the "multiple equilibria" this system can give rise to, some subtypes must be looked at in more detail. A first case deals with the solution with specialisation. If the IBs remain dominant in the payment system and in short-term credit, the effects of the shocks will be felt by them in the first place. How much they spread, depends mainly on the resilience and the reactions of the IBs. In contrast to the preceding model, these banks have no customer relationships so they do not hesitate to make indebted firms feel the full effects of weak disturbances. It may then become necessary to recreate customer relationships, shifting them onto the relation between the bank and the central bank, where it is the latter who takes on commitments, in particular through last resort financing. Because they are intrinsically more unstable in market share and reactions to shocks, IBs may have to reinforce their insurance nature by deposit insurance and/or regulatory measures for safe and sound banking, such as capital requirements. The central bank can try to distance itself from the IB by reinforcing the insurance and prudential aspects of regulation, but can never have the same autonomy it has with the RB since it is now dealing with banks more prone to free riding. Moreover faced with an unstable bank/market relation, with the latter controlling the banks and potentially able to either rapidly enlarge or restrict its influence on the system, the authorities can devolve scarce self regulatory powers to either. A diarchy of regulatory powers must, however, try to avoid creating non neutral relative conditions for the two circuits. When economic policy does not manage to isolate the economy from disturbances, stock market development may be hampered (since it transfers the effects of this instability on wealth owners). In addition subtypes with market dominance may be unstable in the face of external shocks, the more anonymous the market, the less entrepreneurship, in Keynesian terms, is expressed by the actions of institutional investors. Also in this case the central bank must compensate for the lack of stable long-term relations by acting as lender of last resort to the market. In both cases, how much the absence of an

arm's length stance prevents the central bank from putting a coordinated stability policy into practice, is an important question. However, we can not deal with it here except to observe that these systems are incompatible with policies aimed at exchange rates stability over time.

The third type of financial system, with the SBs, is the genuine market centred one, with a market necessarily characterised by those financial firms that ensure its operativity (banks, investment funds, pension funds). In this case we must see how and among whom risks are distributed. The share of risks that the SBs do not cover poses similar problems to those analysed in the two preceding cases, with the difference that from a partial point of view, that of banks alone, the regulatory obligations should deal only with the non securitised and non hedged part. As far as the rest is concerned, the logic of this system requires the market to operate as producer of liquidity and insurer. But when the market is formed of other financial firms which assume shares of global risk, they should be subject to the same regulations as the SBs. In other words, regulation should require internal forms of insurance from those who take on a risk share, without distinctions of any kind as long as it is not the unit in surplus, which at this point should be really "sophisticated". The coherent solution attributes a risk share to the final savers which is a function of the volume of external coverage required by intermediaries. Otherwise there is the danger of concentrating the risk on positions which, being outside any type of regulatory system, constitute the weak link in the financial chain. The solution of the "sophisticated" savers is still rather fragile since it is able to destroy the entire financial system in the wake of disturbances characterised by a significant initial violence; these would be amplified by the attempt to flee before the bubble bursts. The result is that a market centred system can absorb smaller doses of prudential regulation than a bank centred one. It follows that, as in the preceding case, the central bank is needed as an external insurer, ready to provide liquidity directly to the market.

A less flex-price solution is that of large financial firms acting as dealers. In this guise they can internalise significant shares of financial transactions by taking on the relative risks. This may be the mirror image of the RB structure; on the one hand customer relationships geared to a fix-price system; on the other the partial internalisation of a flex price system. The regulatory framework and the role of the central bank are different in the two cases.

Finally we examine how situations of fragility and instability can be created endogenously. In the case of the strictly regulated RB (the implications of ownership will be discussed in the following Section) fragility can be caused by imperfections and incoherencies in the model. This is due in particular to

insufficient screening and monitoring of firms being financed, and to insufficient coherence between the internal and the market pricing, in addition to regulatory and supervisory imperfections. In the IB model some instability is already inherent in the coexistence both of the IB and the market and of the two distinct pricing systems. In this, as in the model with SB, much depends on the capacity of the market to independently produce speculative bubbles and thus much depends on arbitrage unconcerned with fundamentals. The problem lies in the risk holders' incentives to and capacity for obtaining "entrepreneurial" information and maintaining positions which are coherent with the resulting evaluation of fundamentals. Setting up a similar system of incentives seems to me to be rather difficult, even when the market is strongly internalised by financial firms regulated in that sense.

4. The governance structure of the bank

The brief examination of alternative financial systems attempted in the preceding Sections may help us to deal with the topic of the GS of banks from a systematic and coherence point of view.

Naturally we refer to the vast literature concerning the control, governance and ownership problems of non financial firms. The banks in this literature are considered as one of the possible agents of control, that is, in terms of the governance exercised by the banks. As we have already said, the fact that there has, so far, been less interest in bank GS may be due to its not being considered special. Therefore the literature has tended to use methodologies and results related to those of non financial firms. Another reason may be the previous role of the state as guarantor which made the problem practically irrelevant.

The literature on non financial firms has not, however, been able to produce robust results leading to an optimal GS for all types of firms. However, these should point out the relativity of the best GS solution to the specific nature of the firm.¹⁴ The problem we raise here is if the specificity of the financial system is also relevant. One peculiarity of our problem is nevertheless clear: the control solution which requires the participation of the banks is not available to the banks themselves. This brings us to the specific nature of the banks, considered within their coherent financial system; in the light of the above mentioned literature, this means asking ourselves who controls the controllers.

¹⁴ Jensen and Meckling (1976), Aghion and Bolton (1989).

In Hart's terms (1995), the GS is relevant with reference to residual decisions due to incomplete contracts and agency problems. The types of stakeholders interested in controlling the decisions of the firm consist of shareholders, managers, creditors and employees. Since their objective functions are not identical, their interaction produces multiple solutions. These happen both in terms of control - depending on the legal and contractual factors which influence the balance of power - and also in terms of the firm's objective function of synthesis. In particular the solution depends on the incentive system for managers, shareholders, and creditors. Attention, therefore, shifts to potential hostile takeovers, to the concentration of ownership and creditors, and to a series of legal factors influencing the threat of control passing from shareholders to creditors (bankruptcy) and the degree of control held by creditors under normal conditions. The balance of power between shareholders and creditors is particularly interesting, since the former are supposed to have a greater tendency than the latter to assume risks on account of the regime of limited liability. While it is in the creditor's interest that debtors take on a degree of risk just sufficient to guarantee enough profits to service the debt, the shareholder tends to take on greater risks, since only in this way can he reap profits. From this point of view the creditor performs the function of prudential control. The balance between the two groups can take the form of a creditor threat to take over control, if the firm's results are such as to jeopardise its debt servicing capacity within the agreed terms; and/or take the form of the admission of creditors to continuous control with power of access to the firm's information.

Dewatripont and Tirole (1994) is at present the most systematic study of bank GS seen from the point of view of failures justifying the regulation of the sector. Synthesising their argument, banks are considered as ordinary firms, whose specificity is quantitative not qualitative. The only specificity considered is the dispersion of creditors. The authors present an optimal model of GS according to which, if the firm's results are satisfactory, control rests in the hands of the shareholders who choose not to interfere with the actions of management, if, on the other hand, results are unsatisfactory, control passes to creditors who choose to intervene decisively. The threshold which triggers the optimal change in control is reached in function of the results achieved and the prospects for future results, and is therefore also correlated with a given *ex post* level of capitalisation. From this point of view, the Basle agreement which establishes the intervention of the regulator when capitalisation falls below 8%, constitutes a suitable incentive mechanism for managers and the conditional attribution of control, although this may not necessarily be optimal. Moreover,

the intervention of an external regulator should take a similar form to that banks exercise as creditors on debtor firms, imposing a series of *ex ante* covenants regarding the capital adequacy, risk evaluation, restrictions on admitted behaviour, respect of a series of minimum levels of some financial indicators, bankruptcy, etc.

Further and distinct specifications can be grafted onto this basic model with different implications for GS and bank regulation.

As we have already mentioned, according to Dewatripont and Tirole, the peculiarity of the banks lies in the fact that they have creditors, particularly small ones, who have neither the incentives nor the competence to exercise real control over bank management. This gives rise to a representation hypothesis, according to which a regulator who represents the interests of bank creditors is needed. The authors discuss the relative merits of private and public forms of regulation, concluding that public intervention may be preferable if it is related to a coherent system of incentives and if it is accompanied by deposit insurance with pro-cyclical premia.

Starting from the same basic model with regulation as an extra prop to keep GS upright, a series of exercises can be constructed using different sets of hypotheses. If we assume that the dispersion of creditors does not prevent prudential control,¹⁵ regulation becomes absolutely superfluous. If an optimal action of prudential control is linked to the presence of "large" creditors who do not participate spontaneously, either in form or intensity, regulation could limit itself to creating it. Furthermore, if a private deposit insurance scheme with risk related premia produces sufficient market discipline, it becomes superfluous to regulate in excess of the obligation of that insurance, over and above the efficacy of creditor control. If we see the problem in terms of a correct evaluation of risk linked to a system of insurance and reinsurance, then certified self evaluation models of risk, connected to capital requirements, and a private deposit insurance with a certified method of premium fixing could be the right solution. This would mean intervening much more *ex ante* than the control switch discussed by Dewatripont and Tirole.

Dewatripont and Tirole's model helps us to examine several aspects organically; some of these may, however, be over simplified or based on hypotheses meriting further discussion. The first thing we notice is that

¹⁵ Demsetz (1993) for example, distinguishes among the providers of capital those, like bank depositors, that can force liquidation of assets and those that can only sell to the market. The former, although they are dispersed, exercise strong control. For a theoretical and empirical discussion of the arguments see Stiglitz (1985) and Garten (1986, 1988), who deny the presence of an efficient control mechanism by depositors, and Macey and Garret (1988) who state the opposite. From the GS point of view the problem is not only if a group can exercise some control, but even if the type of control is coherent with an optimal solution of power equilibrium between groups. Dewatripont and Tirole's view is that the action of these creditors probably distances optimal control solutions.

shareholders play a merely passive role. The only active one they fulfil is that of calculating the expediency of bank recapitalisation whenever its capital coefficient falls below the threshold level crucial to the change of control. Many problems are thus left out of the analysis, among which those connected to management discipline through hostile takeover threats, which, according to Neven(1993) and Prowse (1995), constitute an incentive for operative efficiency.¹⁶ Moreover, neither the dispersion, nor the concentration, nor the characteristics of shareholders is discussed.

The second issue that must be raised is the outsider nature of control based on incentives, operating *ex ante* on contractual terms (covenants) and *ex post* as a threat on control. Lasting relations are not considered, therefore, in a strategic interdependence environment which would emphasize continuous monitoring technologies influencing the decision making process.¹⁷ This implies, incidentally, that the GS needs to be seen more in terms of the balancing of powers of control, than in terms of control switch. A third problem is the absence of qualitative specificity of the bank which is logically connected to a fourth feature of Dewatripont and Tirole's analysis, common to much of the literature on financial intermediation, i.e. that it is based on partial analysis. The authors limit their analysis to a single bank, with sporadic incursions into non idiosyncratic risks and the existence of a banking system; the capital market is practically absent.¹⁸ These characteristics lead to the placing of too much emphasis on the GS as the testing ground for the whole regulatory design.

Let us begin by examining the GS of banks inside the coherent financial system characterised by RBs. It seems that this is, by definition, a pure model of managerial bank. For the reasons stated above, the RB must control and not

¹⁶ Competitive markets for the control of firms should engender productive efficiency (cost controls) through the threat of hostile takeovers, while competitive product markets engender allocative efficiency (margins). Some authors (Prowse 1995, Tirole 1994) claim that the almost non existent threat of hostile takeovers in the banking sector is strongly influenced by the presence of public regulation making takeovers long and costly. Moreover it strictly limits the sort of agents who can own banks. The proposal is therefore a level playing field, this time in ownership structure of firms in whatever sector. It remains to be seen if hostile takeovers effectively carry out this function: Stiglitz (1985) claims that this is not the case, and that attention paid to banks as actors of corporate governance is due to insufficient shareholder control.

¹⁷ According to Hellwig (1989), the theoretical developments based on strategic interaction "let us see the finance relation in a new light. The one shot incentive problem of Jensen and Meckling is replaced by an ongoing relation involving strategic behaviour on all sides. The implicit determinism of the contract-theoretic approach is replaced by a relation governed by incomplete and renegotiable contracts" (p.284). An ongoing relation linked to monitoring can lead to a less rigid system of covenants and therefore to more efficient *ex post* solutions.

¹⁸ Bonaiuti and Tonveronachi (1996) argue that with deregulation of competition and of banking assets, the exposure of bank ownership to the capital market can aggravate excessive competitive processes. In Minskyian terms, structurally speculative positions that, due also to the equalisation of yields the market requires, tend to competitive processes similar to Schumpeterian innovative-imitative ones, can result in a deterioration of the quality of banks' assets. A greater exposure to the capital market in highly competitive conditions can therefore push the banks towards greater risk taking, thus leading to intermittent phases of high instability. Saunders, Strock and Travlos (1990) had already shown for the US that banks with management control had fewer incentives to risk compared to those with shareholder control, particularly in periods of de-regulation. In this case implications for regulation must derive from GS.

be controlled by the capital market; its management must not be influenced in any way by non financial firms; its shareholders must be passive as in Dewatripont and Tirole's model, in the sense that they "accept" a long-term perspective; creditors also, whether dispersed or not, must be passive as regards control. In other words, managers must not be subject to market discipline of any kind. Dewatripont and Tirole's representation hypothesis is here expressed to the full but the hypothesis of a private regulator is excluded from the start. Public regulation must therefore compensate not only for partial but also total failure of GS. Hence it must take on the entire GS making it compatible with banks which assume the risks of the whole financial system. Such a task can not be carried out by a supervisory body with ample discretionary powers. On the contrary, the system of rules governing it must be both complex and rigid. At the same time, given the necessity of an arm's length relation between banks and the central bank, monetary policy and the supervision of the banking system must be kept separate. The rules imposed must stipulate detailed limits, obligations and incentives so as to constitute almost an optimal banking model seen as a public good. These consist of limits to maturity transformation and credit concentration, risk related capital ratios, constraints on ownership, institutional arrangements that stimulate the collection, production and "entrepreneurial" use of information. This model is coherent with, if not identical to, that of a regulator who wishes to obtain a prudential outcome with a bank of this type, independently of the problem of control. The possible presence of deposit insurance, which in this case is private for the same reasons that lead the central bank to keep itself at arm's length, is not essential from either point of view. In other words, the problem of the GS does not apply to a system dominated by coherently regulated RBs. Nevertheless, the opposite problem can arise of how to prevent shareholders from taking control when supervision is not fully efficient.¹⁹

Let us turn now to the third model of financial system -the genuinely market centred SB model. These banks are subject to the market both for products and ownership and control. This is the model that must more appropriately be seen in terms of GS, its failures and consequent intervention by the public sector. Since by definition this model is not based on the commitments due to customer relationships and operates with a market type pricing, its GS problems are not peculiar compared to both financial and non financial firms in general. The problem of the dispersal of depositors analysed

¹⁹ Hence the need to carefully discipline syndicate agreements and interlocking directorates. The RB model is highly consistent with collusion between banks even as far as ownership is concerned. A possible problem with this model lies in the contemporary absence of competition in the ownership and products markets, which reduces the stimulus to efficiency.

by Dewatripont and Tirole becomes evident here, though no more, perhaps, than for non financial firms, given their one shot relations with several banks. Why should the public sector regulate banking management and not non financial firms? Even the threat of hostile takeovers should be possible as for any other firm. In other words, the bank GS appears, in this case, to be homogenous with that of firms in general, and therefore liable to the same failure problems of GS leading to market regulation. If, as Stiglitz (1985) claims, the solution to the GS of non financial firms is seen, on the contrary, to be the establishment of customer relationships with banks, the only solution is to change the model of financial system to that centred on RBs. Finally the fact that, in this model, the banks may incorporate significant risks and constitute a crucial presence in the functioning of the market, represents a topic for regulation not for GS.

The second model of financial system, based on IBs, market centred to the extent that the market manages to be efficient, seems more problematic. However, given that in this case too, customer relationships are absent and banks, as regards ownership are dominated by the market, the results of the third model remain substantially valid. Once more problems of resilience in the banking system must be faced by regulation and not by the GS. Particular elements of the GS can occur in this model only if it becomes incoherent, with an "excessively" inefficient and weak capital market. However, once again the problem lies not only with the banks but also with the whole complex of firms not subjected to a minimum efficiency control by the market. A "perverse" solution could be to let the IBs dominate a weak market. In this case, maybe, public intervention in the GS of banks would reflect positively on that of non financial firms. Nevertheless this would not engender coherence, efficiency and stability in the system.

On the whole, the coherent regulation of a system based on RBs leaves one crucial element of GS unsolved. This is the requirement that bank ownership be autonomous with respect to an independent market. In principle, in the other two financial system typologies, there are no significant differences between the GS of banks and that of firms in general. It is non coherent solutions that can cause atypical banking situations. Even the restriction on non financial firms to hold a controlling stake in bank capital is not justifiable in principle, if we take regulated systems as our reference. It can be justified, especially in the RB model, by the lack of confidence in the efficacy of prudential regulation and supervision.

5. Open Systems

The analysis has been carried out so far by hypothesising coherent financial systems closed to international relations. Assuming the coexistence of distinct systems, we analyse two aspects of the presence of international relations in this Section: first, the effects of exposure to a uniform regulatory methodology and second, the role of each typology in a global system characterised by the absence of coherence.

The first aspect is dealt with reference to the Basle agreement on capital ratios. The application of these could be interpreted as the state's desire to divest itself of the strict supervision over bank risk limits. Thus it merely subordinates the assumption of greater risk to a higher capital requirement. In some systems its application results in weaker banks excluded from the assumption of higher risk. The weights which are applied to the different types of assets are not only rather arbitrary, but, what is more, completely unrelated to the risks shareholders and creditors are able to evaluate. In one sense, this could almost be considered as a rating function delegated to the market. The latter should impose its discipline by influencing capital costs through risk evaluation. The only remaining supervisory functions over the banking system should be that of enforcing the observance of capital ratios. The minimum European regulatory system seems to add another brick to this construction when it provides for strictly private deposit insurance schemes, which could be seen as simple reinsurance schemes. Thus, in practice, the market remains the sole controller and prudential discipline seems to have chosen the IB and SB systems as its reference point.

However, on closer observation, according to the principle of minimum regulation, which allows each country to reinforce the minimum as long as its logical framework remains intact, wider coherence is permitted. As we have seen in the preceding section, if the other regulatory measures which make it coherent are added to the capital requirements of the RB model, we are still within the specified regulatory environment. The problem remains whether recapitalisation in this model forces that exposure of banks to the market which would be incoherent with it. A banal answer is that, if the capital requirement is fixed according past experience and is uninfluential on financial leverage, recapitalisation does not tamper with the functioning of the model. A more analytic answer is based on the capacity of the bank to self finance its own growth. Assuming a strict adherence to the capital ratio, excluding problems of asset composition (thus fixing financial leverage) and financing growth solely with internal funds we can write:

$$g_a = \mu + LC(\mu + md) - cc - co$$

where g_a is the rate of growth of assets, L the debt /capital ratio, μ and md are respectively the mark up and mark down calculated as a difference between the average interest rate on assets and liabilities and a risk free rate, cc is the dividend per unit of capital added with respect to the risk free rate (cc can therefore be negative) and co is the operating cost per unit of capital.²⁰

Given that the system centred on RB has a strong control over pricing, μ and md can be such as to guarantee strong growth with internal funds. This, among other things, has the effect of limiting cc . RB can therefore keep the market at arm's length as long as the nature of the financial model it operates in does not change.

The IB and SB types of banks being subject to market pricing, may, on the contrary, not derive sufficient funds for self financing and are therefore controlled by the market. When the banks, particularly in the IB model, have a specificity with respect to the market, they can manoeuvre μ , by exploiting their monopoly position regarding small firms for example, and md (if they manage to keep control over the payment system) and can therefore limit their market exposure. For these banks the capital market becomes the selection agent in survival.

Well founded doubts can be raised about the capacity of the market to keep up a prudential rating delegation. Avery, Belton and Goldberg (1988) show a significant difference between the rating evaluation of the public insurance agency and that of the market on subordinated debts of banks in the United States. Their conclusion is that, contrary to controllers' expectations, raising the permitted quotas of subordinated debt has not had the desired effect of enhancing banking supervision through market discipline. The market evaluation is in fact absolutely uncorrelated with an index calculated according to FDIC guidelines or any balance sheet variable. The most significant variables for explaining risk premiums for bank securities are the issue related features of the bond.

As long as these results are general, and the banks belonging to market centred systems do not manage to compensate their reduced power on mark up and mark down with lower capital and operating costs, they are liable to

²⁰ See Montanaro, Scala and Tonveronachi (1996) for the derivation of the equation and its use in an analysis of European banking systems. Some of the present considerations derive from this research. The capacity to impose high μ and md depends on the use of expert human capital and therefore a direct relation of co with μ and md may exist; we must therefore be careful in linking bank profitability and growth prospects to a decrease in operating costs.

suffer from a reduced efficacy of prudential control and greater growth difficulties.

The second question raised by internationalisation is that a global system, composed of different systems, is by definition incoherent and unstable. The solution depends mainly on the relative force of the financial and economic systems in question. A national system of the RB type, in strong competition with market centred foreign systems, may be subjected to great tension. This is due to the fact that market pricing can create problems for a bank centred system if this is incapable of rendering explicit the price/benefit ratio specific to its customer relationships based on commitments. RB survival strategies can include entrenchment and thus a market less open to foreign competition and the generalisation of its specificity. This leads to attempts to exercise some control over foreign markets, which can be helped by a wider internalisation of transactions by foreign firms operating in these markets. International competition poses fewer problems for IBs and SBs given the difficulty RBs have in recreating that complex set of conditions necessary for the development of customer relationships abroad.

On the other hand, the more the opening of markets and competition re-directs financial activities of other national systems towards market centred systems, the greater are the problems for the national central banks of these systems. General or even only extra national turbulences should be reflected in the monetary policies and last resort interventions with an eye more to these global markets than national real economies, lest crises due to incoherencies between structure and control be generated. Globalisation thus reduces those degrees of freedom necessary for market centred systems for internal monetary policy use, including the exchange rate lever. This leads to the creation of a trade off between real sector stability and financial market stability. It is not so much uniformity of regulatory methodologies but competition and globalisation which can create both local and general problems of incoherence and instability.

6. Conclusions

The specific results obtained in this paper are probably debatable. However, the principal aim of the preceding analysis has been methodological. It is necessary to look at the coherence of the financial system in its entirety not merely the relative merits of its single components. The worst mistake would be to want to construct a system simply by adding together single "strong" elements derived from different coherent systems. The result would be, of

necessity, a mix of incoherence, instability and inefficiency. The topic is important not only for economies in transition (developing countries and central east Europe) but also for financial systems in transition- the OECD countries which for years have been going through a cautious re-thinking (US)²¹ and in some cases a more adventurous one (some European countries). International competition and globalisation, in any case, pose problems of incoherence and instability at a general level.

The above analysis has obvious implications for a financial system in transition like the Italian one, which is also in the throes of a heated debate on the ownership structure of banks.

The problem of public ownership in the banking sector has been left purposely on one side so far. In general terms the topic is very simple: if the market GS produces important failures, this opens up an opportunity for the public sector if the failures it causes are smaller. The comparison between market failure and public sector intervention is not simple however. At an abstract level the debate inevitably takes on ideological overtones; a lower level of abstraction necessitates reference to specific realities which are no less debatable. It is perhaps significant that regulation has often been strengthened (although without full coherence) so as to render the problem of GS failure less crucial; furthermore, although not theorised, in fact public ownership has been used as the passive rescuer of last resort.

The problem of the public ownership of the whole banking system is obviously non-existent within a capitalist system. However two distinct questions about public intervention can be raised: a generalised public participation in bank capital as a "prudential shareholder" and the public ownership of a piece of the banking system. The first solution has perhaps never been tried; the second is in fact often an important part of most European systems.

The prudential shareholder solution, when stable, involves the public sector in banking capital in the form of a non-controlling share, just sufficient to enable it to monitor the system continually. Given the potential informational superiority of public supervision of the banking system, such a solution makes sense only in its absence or if it seems necessary to create two autonomous agencies with distinct goals (for example to recreate the diarchy between the

²¹ The US model seems very uncertain at the moment. Not only has specialisation due to the Glass-Steagall Act yet to be demolished, but also the most recent evolution of public deposit insurance points in a rather different direction from that of Europe. The deposit insurance reform has converted the flat-premia into risk-based premia, due to the problems of moral hazard stemming from the previous system. The effect of rating on premia forces a growing cost of those risks effectively taken on. This system seems to be more effective than the European one in the re-equilibrium of risk controls. Moreover the public supervision of the banking system is potentially reinforced, enabling it to constitute the rating reference for the market, and not *vice versa*, due to its superior availability of information.

shareholder and the creditor). This lessens the danger of the regulator being captured by those who are being regulated or by public or private power groups. Since this solution amounts to a declaration of lack of confidence in supervision and given the numerous agency conflicts it can give rise to, we will not go into detail here.

The absence of general supporting criteria seems also to be true as regards the public ownership of a part of the banking sector. In addition it raises the problem of levelling the playing field, as regards capital costs, for both public and private ownership. However, if by public sector we mean the local authorities and not the central government, things are a little different (this is the classic case in both Germany and Switzerland and also in Italy with the bank Foundations). As far as Italy is concerned, given the weakness of the capital market, the Foundations could be viewed as prudential shareholders tied to the continual provision of services in a specific geographical area which votes for the political representatives who nominate the management of the said Foundations. These would have the characteristics of the rentier of the "widows and orphans" type, that is someone who has to live off a financial income and is therefore interested in efficiency rather than taking excessive risks. In this light and keeping in mind the need not to penalise private banks as regards capital costs, the Foundations could take on the role of the influential minority shareholder but not necessarily that of the controlling shareholder. Although the Foundation solution may give rise to doubts due to the excessively close link between politics (although local) and the bank, it is also true that an inefficient capital market can lead to an excessively close link between non financial firms and banks.

In the light of banking privatisations already undertaken and those underway, the main problems of the Italian financial system seem to lie in its ownership as long as the capital market continues to be run by stable minorities acting as majorities (Siglienti 1996).

Looking at the systems analysed in the preceding Sections, the Italian financial system seems to have suffered particularly from not being a coherent model. It could be described as the system with IB but practically devoid of a capital market. Moreover, besides being incoherent it appears to constitute a perverse solution on account of the disproportionate importance of the banks. The current debate on its reconstruction does not always follow a coherent path. On the one hand it is suggested that the German example of universal banks is the one to follow. This leads some Italian banks to want to suddenly learn and teach a trade they do not know. The dangers linked to this transformation increase for banks which face it in a less than florid state. In

evident incoherence with respect to the former, it is proposed also that the banks be subjected to market control, in what is to all intents and purposes a non-existent market. Yet again, along the same lines, the proposal is to strengthen the capital market not only through bank privatisations (rather hazardous in a delicate sector not in perfect health) but also with the creation of strong, new, independent, market actors (pension funds etc.). It may be interesting to see how in this turbine of "good plus good makes optimum" the resulting system will be in fact selected, although leaving it to be selected by the hard facts does not seem to be a solution which maximises *ex post* welfare.

To conclude let us re-examine one of the opening questions on the functional relation between the financial system and the real economy. In order to do this we will resort to a hypothetical example of a country where the massive and hurried eviction of the public sector from the banks must result in their absorption by the power of the largest financial groups of industrial origin, thus becoming functional to the strengthening of corporate control external to a non-existent market. This is also a country where the aforementioned largest groups, on the whole, lag behind the economy which is dynamically propelled by a much less homogeneous complex of small and medium-sized firms. These lack the coordination and sophistication to carve out a banking niche for themselves. The result in terms of the allocation of financial resources is rather evident. Yet this strategy may be justified. If these banks are of the IB type, without customer relationships and commitments, and this national financial system becomes absorbed in a wider area where the relation between monetary policy and banking system is one of arm's length, industrial firms may only reacquire a commitment if they manage to secure some control over the banking system, though using the discretion characteristic of moral suasion.

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