THE LENDER OF LAST RESORT

Marcello de Cecco
Universita' di Roma "La Sapienza"

CIDEI Working Paper n. 49

THE LENDER OF LAST RESORT

Marcello de Cecco
Universita' di Roma "La Sapienza"

In this note I will deal with the structural transformation undergone by the US financial system in the last decades and with the implications they have had and still have for the lender of last resort as a concept and with its practical implementation.

Why I chose this subject is easy to explain: for now almost two centuries, whatever happens to the world financial system is mainly determined by what happens to the US financial system. International financial crises, which have more often than any other cause, called into action the lender of last resort in most countries, or pushed toward its creation, where it did not yet exist, have had the US financial system as their epicentre. Since the inception of the United States as a political entity, the marked polycentrism which has been the main feature of the US financial system, a feature which has become even more marked as time went by and especially in the last fifteen years, rendered very difficult the creation in the US of a canonical credit system, a hierarchical pyramid which culminates in central bank, and is also characterised by a rapidly concentrating banking sector, where very large banks emerge to control the market and to enjoy special relations with the central bank. A large number of scholars, politicians and businessmen has, throughout US history, shown great distrust toward the realisation in the US of this model. They have considered financial polycentrism one of the defining features of American democracy. This feeling was already very much in evidence at the end of the XVIIIth century, it never faded away, and became again very strong since the nineteen seventies.

It is useful to recall here only the most basic elements of lender of last resort theory. Decentralised decision making is a context perfected by economic theorists in the last century, marked by crisis since the nineteen thirties, resurrected in all its strength in the last forty years, because of the success of the capitalist economies and again precipitated into a crisis by the slowing down of the rate of GNP since the first oil crisis. In this context there is logically very little place for the concept of lending of last resort . In such a context there is little place for the general concept of intermediation, anyway. The existence of intermediaries is justified by imperfect information, while decentralised decision-making requires that all agents have equal access to all information, at any time.

Neo-classical theory has its natural complement in the Modigliani-Miller theorem which demonstrates the irrelevance of the financial structure and in so doing extends the concept of monetary veil to the whole financial structure. Thus the system's determination depends on exogenous variables such as consumer choice, factor availability and technology levels and no value can be assigned to an institution, like the lender of last resort, which can acquire legitimacy only if we believe that the financial structure is relevant. In particular, we must believe that the banking system, as provider of a public good as an efficient payments system can be seen to be, is relevant to the efficient functioning of the whole economic system. This is why the most consistent among neo-classical economists, F.Hayek and G.Stigler being the best known among them, have flatly denied any institutional relevance to central banks especially as lenders of last resort. Their faithful disciples have, moreover, striven to demonstrate the free banking and currency competition are indispensable to the well functioning of the economic system. They have reproduced, without of course having any notion of it, the heated debated on free banking and currency competition which raged in Italy in the second half of the XIXth century.

Less radical neo-classical economists, however, have tried to rationalise the existence of institutions like central banks, which are, by their very nature, the negation of laissez faire, within the theoretical context of decentralised decision-making, by using ad-hoc arguments such as the need to protect the payments system which is a public good. They did not realise, or realised with some embarrassment, that, once a limitation is introduced to decentralised decision-making, we get into a dark night of sub-optimal choices where all cows are black and unique solutions evaporate or at least become extremely unlikely.

As is well known, economists are ill at ease when they think without a precise theoretical framework. This is why they have welcomed the arrival of a new theoretical paradigm, which has been constructed in the last two decades, the theory of asymmetric information and of decision-making under uncertainty. Within the new paradigm, the central bank and the lender of last resort function in particular, can be found a comfortable and legitimate ubi consistam. With the speed of diffusion which characterises mass societies the new information theories have replaced theories of the real cycle and rational expectations as the winning paradigm, as scholars previously wed to it rapidly repudiated their old beliefs.

On the basis of asymmetric information theory, with its important complements, adverse selection and moral hazard, the non-relevance of the Modigliani-Miller theorem can be easily established outside a world of perfect information. The relevance of the financial structure for the dynamics of an economic system can be then inferred. From that it is only a short step to proving that banks are unique or at least peculiar credit intermediaries and organisers of the payments system which makes a decentralised decision-making system a working proposition. At this point, it is not difficult to introduce central banks, as institutions necessary to safeguard the payments network. If attention is paid to an important feature of a fractional reserve banking system, namely its capacity to multiply and demultiply credit, it is easy to notice that such a system will be inherently unstable, and that an economic system based on fractional reserve banks, and therefore unstable, will require an institution which will play the role of lender of last resort in the lamentable but frequent cases when the banking system will demultiply its credit creation powers.

It is now appropriate to introduce the concept of moral hazard. In an asymmetric information context, the well known formula known as the Bagehot Rule for the activation of the lender of last resort function will be vitiated by a difficulty: it is practically impossible for a central bank to know whether banks requiring loans of last resort are illiquid or insolvent. As is known the Bagehot rule mandates that only illiquid banks be admitted to last resort lending. But if the lender of last resort faces an insolvent bank, if it refuses to bail it out it will by this action most probably determine a serious demultiplication to occur to credit available. The payments system will be accordingly weakened and since the latter can be considered a public good, it is clear that the Bagehot Rule is not easily applicable and that last resort loans must be provided every time the payments network is in danger and severe demultiplication can occur in the country’s credit system.

It follows, of course, that if the Bagehot Rule is modified to include insolvency, all banks which, because of the state of their balance sheets, represent a potential threat to the stability of the credit system are perfectly aware of their being indispensable and therefore virtually immortal as institutions .From this awareness they can derive a cavalier attitude toward risk, in the quest for higher profits. The banking system can accordingly develop an excessive propensity to expansions followed by equally excessive interventions by the monetary authorities. The latter, aiming to reduce the volume of reserves which they have themselves created to bail out the risk-prone banks, may end up destroying the smaller banks, which are too small to influence the trust of the public in the credit system, while the real culprits, the banks that are too big to fail, manage to escape unscathed and can start, after a short period of quiet, all over again on too bold a path of expansion.

These are the considerations that can be made on the subject of lending of last resort without incurring any loss of generality. We may add that the late but welcome discovery of the special “credit channel” in the transmission of monetary policy by contemporary American monetary economists , as it gives back to banks their uniqueness as lenders tied by long-term relations to their borrowers, reinforces arguments in favour of extending loans of last resort even to banks whose assets of a particularly low grade. It is in fact clear that the credit channel is essential in a world where information is imperfect and that it helps to keep a satisfactory level of competition in the economy, as it prevents small firms from being discriminated against, since they have no access to financial sources alternative to banks and it also reduces the natural tendency of financial markets to prefer short term investments, when they work under uncertainty.

Observers of the US financial environment have noted that in the last three decades a notion of credit of last resort has gradually prevailed there which is very different from the one ruling in countries like Germany which have experienced a much smaller dose of financial innovation. Financial operators and politicians in the United States seem to take unlimited competition among financial intermediaries as the optimal state of nature. They seem inclined to think that the financial market must be open to all new entrants and to all innovations. At the same time they seem to expect an extensive and omnipresent application of deposit insurance by the State and an equally extensive and credible availability of credit of last resort in the case any of the parts of the financial market is hit by crisis.

It is essential to try to understand why this progressive enlargement of the concept of credit of last resort from the status of a resource available only in cases of extreme emergency to that of almost natural component of the cost and revenue calculations of US financial firms has occurred. I have dealt with the development of US financial structure elsewhere in the past. I must, however, recall some important passages in this story, in order to clarify how it was possible that an institutions deemed to function only in extreme cases was extended to cover the almost day to day functioning of the US financial system.

It is necessary to call back to memory the situation in which large US commercial banks were placed by New Deal credit reforms. They were deprived of their security trading activities by Glass Steagall. The segmentation of the credit market enforced by Roosevelt to favour house building finance protected institutions like Savings and Loans and Thrifts from competition from the large commercial banks. The latter could choose between reducing their scale of operations, as their loans were much greater than their clients’ deposits, and openly defying the Roosevelt reforms by reacquiring their capacity to collect interbank deposits through imaginative financial innovation. They managed, first of all, to sabotage Keynes’s and White’s international monetary reform plans, which contained clauses meant to heavily discourage international short-term capital movements . Foreign deposits flowed into their coffers from all over the world because of the cold war. Right after that, the return to active use of monetary policy for macroeconomic regulation by the US authorities put the large banks in a position to invent instruments like certificates of deposit, which directly competed with treasury bills which large scale financial operators and provincial banks favoured. Later on, the large banks were able to direct towards foreign financial centers the short-term resources of large American multinational corporations cleverly bypassing the limits imposed to interest rates on bank deposits by Regulation Q. They were thus able to beat the competition from provincial banks and thrifts, which were better spread over the US territory and therefore enjoyed a plus vis-a-vis the large banks, who were prevented by law to have branches.

The joint effects of the ever more frequent use of monetary policy because of the paralysis of fiscal policy, and of the battle engaged by the large banks to keep their market shares was that, starting in the 1960s, the US financial system experienced an ever increasing degree of turbulence. The political decision to control a war economy solely by monetary measures induced violent credit squeezes, which managed to drive a wedge between large firms and banks, when the latter showed that they were incapable to guarantee the former constant and dependable credit flows. large firms started as a consequence to access the financial market directly, by starting the commercial paper market. Banks were thus increasingly disintermediated. In turn, private savers started leaving bank deposits for the higher yields offered by financial institutions which had invented money market mutual funds, which formally are fund units, but in reality give all the advantages of current account deposits, including that of issuing cheques.

The turns that financial innovation takes in the US starting in the sixties are mostly induced by the authorities' need to use interest rates as an anti-inflationary weapon, because fiscal policy is a political cripple. After the credit crunch of 1966, which gave rise to the commercial paper market, other crunches followed, which induced elusive reactions on the part of the ablest operators, and the introduction of financial instruments less and less sensitive to credit restrictions.

By definition, these were securitised instruments, directly linking debtors and creditors, and thus immune to credit rationing, as they were off- balance sheet.

Every credit crunch has therefore been followed by a wave of financial liberalisation, aimed at giving back competitiveness to the banks, which were the sole victims of the crunches and as a result of which the authorities lost another degree of control over financial markets.

The US financial market has thus reacquired the cyclical features it possessed before the Roosevelt Reforms ironed them out by legal market segmentation and specialization. As fiscal policy was no longer used to smooth the ascending phase of a cycle and sole reliance was placed on short term interest rate policy, turbulence was reintroduced into the US financial system, since no attempt was made to establish a precise hierarchy of financial institutions, linked by stable long term relations to the central bank. This disregard can be attributed to the central role of financial engineering in US politics. Politicians believe that financial power is essentially evil. They do not manage to repress it, and legislate in a way that makes financial concentration grow, but gives it a peculiarly American blend, not replicated anywhere else.

In particular, legislation and its enforcement prevent the chrystallization of a stable financial hierarchy and the establishment of geographically diversified universal banks.

All the structural modifications I mentioned above set in motion a trend to get hold of financial resources by price competition, i.e. by interest rate competition. At the same time, the long spell of modest growth rates experienced by the US economy induced the need to expand consumer purchasing power through personal credit and mortgages, in order to exhaust all productive possibilities, since modest growth and the persistence of vigorous growth of personal incomes induced a strong reduction of personal savings out of current income.

This is not the place to analyse the causes of the decline of private savings in the US. It is sufficient to note that an ever decreasing share of savings has become the target of an ever increasing number of financial institutions and intermediaries. AS a result, the cost of funds has gone up and intermediation margins have gone down.

Banks have therefore been disintermediated to an increasing extent, as they were the only victims of credit crunches but also suffered from the companies' drive to economise on liquid inventories.

As cash reserves were reduced and financial leverage increased, financial intermediaries were pushed towards less prudent risk evaluation, and to a greater reliance on public institutions to provide liquidity in case of need.

Thus deposit insurance started being used in a cavalier fashion, by fragmentation of deposits to by-pass the ratio of the law, which had wanted large deposits not to be insured. And borrowed reserves , obtained in wholesale markets, began to form an ever larger part of financial institutions. This increased the risk of unforeseen withdrawal and of inability to roll-over the borrowed reserves, with the serious possibility of asset-liability mismatch.

Securitised debt, moreover, became a large part of total debt, thus giving the superficial impression of a decreased liquidity risk, but hiding in the back huge insolvency risks, inadequately assessed and provided for. Lastly, derivative products flourished, with all the formidable risk-evaluation problems attendant upon them.

All these developments have conspired to making the US financial system very fragile and to convince the great part of the institutions which compose it to behave in ways which assume that a steady flow of liquidity will be at all times made available by the authorities, and in particular by the Federal Reserve, to face emergencies the market has come to experience almost daily. The lender of last resort can thus be said to have become a lender of first resort. US financial institutions, especially the largest ones, fully understood the opportunity for reserve economising they were offered by the authorities ' willingness to defend the stability of the huge American financial market against illiquidity and even insolvency risks. The speed of financial transactions and their global span gave large financial intermediaries a chance to have reserves and use them, by exploiting time-zone differences.

The continuous availability of the publicly provided protective net, which allows operators to work at the limits of risk-taking is now openly preached and accepted even in places where greater prudence would be advisable. The tax-paying public does not seem any more worried about the improper use of its money to shore up the financial system. As Hicks and Goodhart remarked some time ago, all citizens are now engaged as both debtors and creditors, as well as wage and profit earners. They are all interested in the stability of the financial system as a superior public goal, to come before any other in peacetime.

No wonder private financial institutions are allowed to take public assistance against illiquidity and insolvency for granted and thus push towards the limits of risk-taking and profit maximisation. The availability of private reserves becomes unnecessary when public ones can be relied upon to stand-by at all times.

While the US financial system has acquired the features of permanent fragility we have mentioned, with the equity, efficiency, and moral hazard, problems attendant on it, serious dangers are posed because of the integration of the US system with that of the rest of the world and, in particular, with those of its parts which are represented by financial systems where different institutional habits prevail, especially for what concerns last resort lending.

We have in mind countries like Germany and other European countries where the so called bank-based model of financial development prevailed. These countries have favoured the growth of banks characterised by geographical diversification of their branches, which as a result do not rely on purchased funds. The international inter-bank market is thus polarised between US banks, which are now used to pushing illiquidity to its limits, as they can rely on the constant presence of the FED in the market to supply liquidity, and other banks, which are endowed with owned reserves as they cannot be sure of being shored up by their national authorities.

It is the more and frequent coming into mutual contact by banks belonging to different cultures as to last resort lending that makes for increasing potential instability in the international financial market.

An early example of this cultural difference occurred in 1974, when not only the Herstatt and Franklin National crises were faced by the respective national regulators in diametrically opposed fashion, but the mistaken expectations of US and UK financial operators about the behaviour of the Bundesbank induced an international financial crisis of major proportions, when they realised that the Bundesbank would calmly watch the Herstatt Bank go bankrupt.

US banking sources then blamed the lack of international experience on the part of the Bundesbank. They did not realise that they had just watched a central bank applying banking principles radically different from their own current ones.

This cultural clash has again occurred in following years, and the last instance of it can be seen in the behaviour of the Bundesbank in the course of the EMS final crisis, in 1992. Once again, German authorities refused to supply liquidity to a market which had taken for granted that they were obliged to do it by the EMU Agreements. They preferred to scrap EMU rather than their own central banking philosophy. They obviously thought that in the near future they would be able to achieve a smaller scale EMU, based on the Dmark and with fewer and more likely partners whom they could credibly defend from international speculative attacks without endangering the domestic monetary stability of Germany.

Returning to US financial problems, the institutionalised illiquidity of the US financial system poses serious limits to the credible use of monetary policy for macroeconomic regulation; It is reasonable to believe those economists who have discovered the existence of the so called credit channel of monetary policy transmission. It must then be concluded that, at each credit crunch, followed by liberalisation measures and by credit expansion, a smaller percentage of total credit is intermediated by the traditional banking system. And since the traditional banking system is the one that supplies small manufacturing firms the financial means they need, a reduction of the weight of banks on total credit means that small firms are sacrificed, and they provide the great part of new industrial jobs in the US.

The effective transformation of last resort credit in continuous involvement of the authorities in the money market to guarantee stability leads also to the selection, among financial operators, of those with the highest preference for risk-taking, who also have the greatest ability to devise financial techniques and instruments difficult for the authorities to understand. It is not excessive, therefore, to maintain that authorities are now reduced to a state of permanent captivity by the market, which makes their restrictive measures hardly credible.

It is instructive to consider the events of the early nineties. The US financial market was in the previous five years engaged in a growth experience altogether within the line analysed above. At the dawn of the new decade there followed, however, a credit crunch which could not be laid directly at the door of the monetary authorities, and even less could be attributed to the rise of interest rates in post-unification Germany. Observers seem to agree on pointing their fingers towards the new capital ratios determined in Basel by the Cook Committee, which could be the real culprit of the strong credit deflation, which led to a decrease in nominal M2. The irony of history is that the Cook Committee was established at the instigation of the US and UK monetary authorities, when the giant balance of payments surpluses which flowed to Japan in the 1980s were used by Japanese banks to build up an independent multinational financial industry to compete with the ones US and UK banks had built up in the course of decades. The clever idea was hatched that if Japanese banks, notorioulsy undercapitalised, were asked to set aside more capital to foot the much larger mass of intermediated funds, they would find a limit to their business expansion. What happened in reality was that the re-capitalization of Japanese large banks took place rather easily in the booming conditions of the Tokyo Stock Exchange. It was US banks, made heavy by the Latin American debt crisis and by the post-1987 Wall Street slump, found it difficult and expensive to raise new capital. After the coincidental slump in the US house and commercial estate market, US banks had to face three serious problems at the same time ,and did so by decreasing loans to respect the new capital ratios and being unable to raise sufficient capital to expand loans, while a lot of their capital was tied up by Latin loans and mortgages that had gone sour. This in turn induced a fall in deposits, hence a lower nominal M2. US banks experienced at the same time a profitability crisis which started a vicious circle, as it brought down bank shares on Wall Street, and thus their capital values.

The US monetary authorities were faced with a new serious crisis in the banking sector, just as they were emerging from the emergency operation they had to engage in to shore up the S and Ls. It is convenient to recall that the S and L crisis had been the result of the last bout of financial liberalisation, and the ensuing savage competition between banks and S and Ls, which had followed the jump in interest rates engendered by Governor Volcker to stop two-digit inflation at the turn of the eighties. At the turn of the nineties, the new credit crunch induced the FED to inject massive reserves into the banking system at bargain interest rates, which the banks used to buy treasury bonds carrying much higher coupons. The spread between lending and borrowing rates was used by the banks to accumulate new capital, and face the Basel ratios. A gigantic transfusion of public funds took place in this fashion, a new example of "creative" lending of last resort. No voices seem to have been heard in the US Congress or in the press chastising this flagrant case of loss publicization.

This cavalier use of lending of last resort, which has gone on for a remarkable amount of time, has allowed US banks to reconstitute their capital and regain an accounting solidity, further reinforced by the issue of new shares at the remunerative prices allowed by their return to profitability, courtesy of the public purse.

A banking crisis of giant size was exorcised, but the positive result of an economic reflation was also achieved when the reduction of short rates influenced long rates.

At the sae time, US Congress and Administration together found an equally generous(with public funds) solution to the S and L crisis. The cost to the public of shoring S and Ls up has been reckoned too be about 500 billion dollars. That of rescuing the commercial banks has not been reckoned, but it is not very far from that. Taking the two together, the bill the US public has footed is of a size higher than anything that has been done before, anywhere.

And, above all, the continuous presence has been institutionalised of the public operator in the financial market, and it has been openly admitted that without such presence that market is unable to work fluidly, reliably and continuously.

It is not a small admission to make, if we notice that all these public interventions have been decided and implemented by strongly conservative Administrations, which were voted in to bring back the working of the free market in a country, like the United States, after decades of supposedly dangerous "dirigisme and etatisme".

The bank-rescue operation of the early nineties found an eager imitator in the Japanese monetary authorities, when they were in their turn faced with the need to save their banking system, brought to the verge of insolvency by the savage revaluation of the Yen which the low Dollar, in itself a by-product of the salvage of US banks by the Fed, entailed in the early nineties. The Bank of Japan has spent the best part of the last three years injecting liquidity into the banking system, bringing down the whole Japanese interest rate structure to levels never before experienced since the War. Those funds were re-lent by Japanese banks at much higher rates, and they pocketed the differential, and used it to shore up their balance sheets. The Bank of Japan's newly created money thus spread to the whole world financial system, feeding the convergence game that has raged in the last two years and bringing about the boom and bust of the Asian financial markets we are currently witnessing.

The domestic effect has, however, been much smaller and lower-grade than the one the Fed policy had. The Japanese banks were faced with a stock-exchange which did not boom sufficiently, and by a domestic demand for credit which did not revive. What was missing was the revival of the Japanese economy through a boost of internal demand, as it had happened in the US. The reason for the inferior performance of the Japanese replica of US policy has to be found in the simple fact that monetary policy cannot be used, in Japan, but also in Continental Western Europe, to boost consumer demand. Japanese families, like their European counterpart, are net lenders. Mortgage terms are rather strict and stingy in Japan. Families are supposed to save and then buy. Interest rates, as a result, do not stimulate demand for consumer durables, as they do in the US and UK. They only work on investment, if demand prospects are bright.

This is a clear example of how difficult it is to export monetary management techniques developed in one country to countries which have very different economic and social institutions.

Still, this is what financial globalization is all about. It is a one-way trend, to transform financial systems , invented to maximise the growth rate of late-comers into financial markets, which respond to price impulses coming from changes in supply and demand.

There is a school of thought which has viewed efforts by the European countries to form a Monetary Union, as an attempt to

create a monetary area sheltered from the most disruptive effects of US-led financial liberalisation. The turns and twists this effort has undergone since it began have, however, meant that the European monetary union has acquired, along the road to its realization, very peculiar features.

It is altogether possible that , as of Jan.1 , 1999, the EMU will have, for all practical purposes, very strict monetary and fiscal rules to abide by. Fiscal policy will be stilted by the Stability Pact. Monetary policy will be restrained by the pursuit of price stability given to the ECB as priority aim.

The EMU will have another unusual feature. It will be a monetary federation where the Federal central bank will be entirely separated from political power. Governments will lose monetary sovereignty . The European Central Bank will issue the Federation's money, the EURO, national debts will be denominated in Euros, but the national governments will lose their power to issue Euros to redeem their respective national debts. The EMU will be characterised by the unusual feature of having no sovereign debt. National debts will cease to be sovereign debt. Governments issuing them will be rated , by international rating agencies, according to their fiscal capacity to repay and service the debt they have issued. This is , of course, always been true for foreign-currency debt. National debt issued by single governments has always been graded(rated) according to the issuing agency's ability to get hold of the foreign currency necessary to service and repay the debt. Debt monetization, in other words, will cease altogether to be an appurtenance of national governments.

The monetary unification of Europe ought to bring about the rapid integration of financial markets in the area where it will be in effect. If the trend towards adoption of anglo-american institutions will continue, financial integration will take the shape of a greater reliance on markets and a drive towards larger and larger multi-division universal banks, which will compete fiercely among themselves for market shares. A rather long period can be envisaged during which financial fragility ought to increase, rather than decrease. Competition will induce banks to cut costs to survive, and to increase market shares and profitability. In order to achieve these results, banks may be induced behave in less than prudent ways, to reduce reserves, to acquire risky, if profitable, assets. If US experience, as briefly evoked in the first part of this note, is anything to go by, competition might lead large banks to take risks in the expectation that they will be saved by the authorities. An additional problem will be represented by the fact that among the banks working in the EMU area, there will be the subsidiaries and branches of banks having their base in countries that are not members of the EMU. They might be used to thinking that their own monetary authority will bail them out in any case, and behave with a less attentive eye to prudence, thus inviting imitative behaviour on the part of EMU based banks.

For all these reasons, financial fragility might increase, as I just said. It is thus interesting to see in what way the EMU plans to face this eventuality, which is indeed more probable than just possible.

Is it too radical to consider the ECB , under the present conditions of monetary and fiscal rigidity, as more akin to a currency board than a central bank? Certainly, its member banks will be deprived of the independent power to create Euros. The ECB Statutes do not give it the mandate to act, if necessary, as a lender of last resort. Supervisory powers will be left to the member banks, over their respective national banking systems. If financial fragility arises as a critical condition for the whole EMU financial market, the absence of positive enabling rules will not totally exclude the ECB from the possibility of acting as a Lender of Last Resort. But supervision by the member banks(or by the national supervisory agencies) ought to uncover cases of banking illiquidity in most of the countries of the EMU, at the same time, and report them to the ECB, of such a diffusion and gravity as to prompt its action as lender of last resort, after an interpretation of its status such as to grant it those powers. Suppose, however, that illiquidity is experienced by just one of the member countries' banks. The national central bank of the country in question, if it has a stock of liquid national debt, can exchange government bonds for the illiquid paper of the banks that are in trouble. What if, however, the illiquid assets of the banks in trouble are of non marketable sort? Were they marketable, even if at a capital loss, there would be no illiquidity problem. Thus, the very nature of the lender of last resort is denied if national central banks are restricted to exchanging low-grade paper against good marketable paper. In order to inject fresh good funds into the banking system, they ought to ask the ECB for permission to draw down their accounts at the ECB, and lend the Euro thus obtained to the banks in trouble. All this assumes that the national banks are still able to evaluate the non-marketable assets of their troubled commercial banks. The last years have, however, witnessed a trend towards the exclusion of non marketable securities from the list of instruments eligible for rediscount by central banks .

This trend does not seem to have involved the Bundesbank, which still keeps a discount window for non-banking clients. Other central banks, however, seem to have ceased having non-banking clients a long time ago. They have accordingly lost the capacity to assess the quality of non-marketable assets.

They are therefore increasingly unable to rapidly assess whether a bank's assets are illiquid or whether they are of such low quality as to precipitate the bank into insolvency.

Given the national central banks' inability to create Euros, they will have to face bank crises either by obtaining loans in their own name from the ECB, or by recycling reserves within their own banking systems from surplus to deficit banks adding their guarantee. Alternatively, they might pass the onus of resolving bank crises to their Treasury Ministry, which will only be able to face them by the use of fiscal revenues.

Whichever way one might decide to look at this problem, it seems reasonable to foresee that the lender of last resort role will be considerably played down in the EMU. Darwinian selection thus ought to reduce the number of banks, as the survival of the fittest, which for all practical purposes is equivalent to survival of the strongest, becomes the market rule in the EMU's financial system.

What is true of the ECB, however, is certainly not going to be true of the largest remaining central banks, like the Bank of Japan, and especially the US Federal Reserve. The objective of price stability is not mentioned in the Statutes of the Fed. It is stabilisation of interest rates which in that Charter, receives pride of place as the primary task of the US central bank.The Fed, as a result, will be complettely free to come to the rescue of its of banks whenever it sees fit to do it.

The practical removal of a general safety net sheltering national banking systems, therefore, will make the EMU largely dependent on the availability of good funds created by the Fed, if a crisis erupts in the European banking system.THese funds will be used, however, by the US banks which have them at their disposal, to buy themselves market shares in the banking markets of the EMU.

An interesting example of what might be the scenario of a future bank crisis in the EMU is provided by the recent banking crisis in Argentina, which followed the Mexican crisis.There, according to a recent IMF working paper, the severity of the crisis was tempered by the existence of publicly-owned banks, which the public considered unlikely to fail, by the dollarization of the economy, which sheltered many transactions from exchange rate risk, and especially by the presence of banks owned by large and solid foreign banks. The latter were able to summon up help from their own headquarters, in the form of good funds, which they employed to increase their shares of the Argentine banking market.

A lender of last resort of a kind was thus availabale to the Argentine banking system. It was not Argentinian, however, and it was not public.It was constituted by the reserves available to the Argentinian subsidiaries of foreign banks, not subject to the lack of a national lender of last resort, as their Argentinian counterpart were.

In the end, therefore, the Argentinian banking system may have seen the survival of the fittest, but fitness was equivalent to access to good funds outside the organised market, via the foreign banks' oawn headquarters, which played the part of lender of last resort to their subsidiaries, in conditions hardly to be called of great transparency.

It will be interesting to see whether the EMU will agree to let its banks undergo a similar treatment, if similar conditions present themselves.Foreign-owned banks, having access to a lender of last resort, will in fact be able to compete unfairly with local banks.And they will survive, while many of the local banks will go under, even if their assets are equally bad. Competition will thus exercise a peculiar type of natural selection in the EMU banking market.

The inception of the ECB, therefore, is going to see the return to a restrictive and limited vision of central banking, with a distinctive dislike of interventionist policies of the LLR type. At the same time, financial market integration in Europe is going to increase and acquire an altogether faster pace. Continental banks are going to compete among themselves but also with British and American banks. The latter are used to operating with much smaller reserves, on the assumption that the Fed , and the Bank of England, are constantly in the market to smooth out temporary illiquidities that might occur. As a result of this competition, bank reserves are going to decrease in Europe accordingly. The need for a LLR institution is thus going to become greater, just when national central banks become unable to perform it and the ECB is heavily restrained, by its statutes modelled after German central banking practice, which has always shown a marked unwillingness to perform the LLR function.

The possibility therefore exists that the supply of the LLR function will come from the Fed, as the latter will be free to create good funds to smooth out temporary illiquidity in the European market. But it will do it as the dearth of good funds in Europe will be transmitted to the US market by US banks operating in both markets. The Fed will help US banks and this will make them increase their market share in Europe, as they will be given an advantage over native EU banks. A situation might develop in the EMU' s financial market resembling a mixture of Argentina 1996 and of the free banking Scotland of the XIXth century, where Scottish banks relied on the Bank of England to provide good funds in emergencies.

Increased central bank rigidity, therefore, will coincide with increased elasticity in the use of bank reserves, and in smaller percentages of reserves being kept by banks. Only an outside deus ex machina, the Fed, will be able to avoid recurrent bank crises in the EMU, but at the cost of increasing US banking hegemony in Europe. The ECB will provide the ballast, and US banking(including the Fed) the wind in the sails of the EMU financial market.