THE CHALLENGE OF EUROPEAN INTEGRATION FOR PRUDENTIAL POLICY.

Michel Aglietta (university of ParisX-FORUM and CEPII)

and **Laurence Scialom** (University of ParisX-FORUM)

ABSTRACT.

The economic unification of Europe is taking a long time**.** It has become more challenging with the advent of financial integration and the single currency. Under the pressures of globalisation and, as a necessary by-product, of increased competition, the risk profile of financial systems has dramatically changed for the worse. In Europe, soft compromises, which the principle of subsidiarity entails, have impeded the necessary reform of financial safety nets. This report will study the forces of competition which reshape financial systems and the changing pattern of risk. It will also review the theoretical foundations of prudential policy, which inspired the institutional design of the financial safety net. Finally, it will point to the shortcomings of current prudential policy, which result from a tension between the highly decentralized prudential framework and the ongoing progress in financial integration.

Despite substantial progress, financial integration is still incomplete. With regard to debt markets, the integration project has admittedly moved faster and forced intermediaries to strengthen their domestic position.-Banks have remained under national supervision while their risks are increasingly cross-border. As a consequence, endogenous risks, which stem from market inter-dependencies, have raised the vulnerability of markets to systemic risks.

There has been a mixed response to this challenge. The aftermath of the terrorist attack has shown that when confronted with obvious systemic risks the European Central Bank is ready to fulfil its lender-of-last-resort responsibility. But when confronted with a covertly unfolding systemic episode which is generated by fast-growing indebtedness, the ECB lacks the information and the resources to diagnose the problem and intervene in a timely and effective manner. The cause is an overly decentralized supervisory structure: Market exposures are left undetected because bank supervision is conducted at the national level and a mechanism for multilateral cooperation is lacking.

There is much scope for improving the financial safety net, without resorting to full centralisation. The final section of the report sets out proposals combining cooperation among national supervisors and minimum centralisation. The ECB should be capable of performing this task efficiently, because a single currency calls for a lender of last resort with overall responsibility for liquidity. Thus we propose the creation of a European observatory of systemic risk. We also propose the establishment of a European agency for transparency to coordinate

information flows among national supervisors and enhance disclosure requirements. We suggest that prudential rules could be further harmonised with regard to deposit insurance schemes; that capital standards for banks should be sensitive to the credit cycle; that the creation of European rating agencies should be encouraged and those agencies should be accredited by a committee of bank supervisors. Finally, the report stresses that the most acute problem lies in the resolution of bank crises insofar as crisis management involves the use of public funds. In failing to bestow the ECB with responsibility over this major question, fiscal subsidiarity collides directly with monetary sovereignty.

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INTRODUCTION

In the last twenty years, Western Europe has experienced dramatic financial changes. These changes have partly been the outcome of the forces of competition which financial globalisation unleashed. But to a large extent they have been policy-induced. Deregulation started in the early eighties in the UK and in the mid-eighties in the rest of the European Union with the launch of the Single Financial Market. This project was conceived and proposed to the national governments by Jacques Delors, then president of the European Commission. It was further enhanced in the late eighties by the commitment to create the monetary union. The proposal for the EMU was eventually enshrined in the Maastricht Treaty which was agreed upon in February 1992. This was a period of institutional innovation which was subsequently implemented in the following decade.

European reforms are original insofar as they encompass both financial and monetary integration. Indeed the former does not necessarily lead to the latter. It would have been feasible to foster financial integration under a flexible exchange rate regime or to develop a parallel European currency. Alternative plans were also laid out. Some were encouraged by national authorities, including the UK Treasury which was hostile to monetary unification. Furthermore, the flow of European Directives regulating competition in financial markets partly preceded and partly overlapped with the preparation of EMU. With regard to financial safety nets, it is therefore possible to distinguish between the individual elements of financial and monetary integration.

Moreover, the last decade was a time of further market integration, particularly with the success of financial derivatives and the spread of financial globalisation to new emerging markets. These developments caused further financial disruption, as it is demonstrated by a long chain of crises. The disturbing events prompted central bankers meeting in the Basel Committee of Banking Supervision to propose prudential reforms. The EC standards were partly an adaptation of prudential rules set out by the Basel Committee and partly designed by EC authorities for the purpose of monitoring the restructuring of financial institutions and, ultimately, accelerating the process of European financial integration. In the mean time, central bankers embarked upon a major effort to strengthen wholesale payment systems and interconnect them into TARGET. The purpose was to reduce systemic risk and establish the infrastructure for the future single monetary policy.

The structural changes mean that the different layers of the financial safety net are multi-faceted. These layers might be inconsistent, might overlap in some respect**s,** and might have loopholes**,** and entail uncertainties as to which prudential institution is responsible for monitoring which type of risk.

Our understanding of the European experience will aim to account for the dual nature of integration (financial and monetary). We are also aware of the contradictory political goals that shape the European project. Strong national interests have always been reluctant to surrender their prerogatives, particularly in cases of well-entrenched national institutions. This explains the excessive use of *subsidiarity* as an argument for keeping supervision at the national level. Only the setting of rules and standards in financial matters pertaining to competition policy has been delegated to the European Commission. This has always been a matter of principle in the construction of Europe: *strong in rule making, weak in collective action.* More recently, the only exception has been monetary policy *stricto sensu*. The monetary union was the outcome of a compromise between French and German politician following the fall of the Berlin wall. For the

sake of strong political ties, German leading politicians agreed to abandon the DM despite the reluctant Bundesbank. But they insisted that the monetary union should be shaped in their own way. Because the German banking system was segmented and financial markets were underdeveloped, German tradition required the decentralisation of banking supervision at the local «state» level and the allocation of responsibility for emergency liquidity assistance to a special institution**,** commonly owned by the commercial banks, away from the central bank.

It follows from these characteristics of European politics that micro-prudential supervision has been left to national entities with disparate views of how it should be organized and run. At the macro level of crisis management the master word is *ambiguity.* This is the key reason why the lender-of-last-resort function was not explicitly assigned to the European Central Bank (ECB) in the Maastricht Treaty.

The picture emerging from such continuous political negotiation is the failure of prudential institutions to keep up with market developments. On the one hand, national prudential policies were fitted to «bank-driven» rather than «market-led» financial systems. On the other hand, excessive reference to subsidiarity undermines the need for collective action at the European level when endogenous risk «spills over» securities markets. This report will point to deficiencies in both respects. It will also draw from modern theories of systemic risk to outline areas where subsidiarity is not working properly and it will make proposals to remedy actual shortcomings in the European safety net. The proposals will distinguish between micro-prudential policy towards financial firms and macro-management of overall financial stability. For the former issue we will not recommend the creation of new European supervisory agencies, but a closer cooperation and a reconciliation of policies amongst existing national agencies. For the latter issue, on the contrary, we will strongly argue that lender-of-last-resort and related crisis management functions should be unambiguously vested on the European Central Bank**,** under the ultimate authority of its Governing Council for monetary policy. Finally, large or multiple bank failures, affecting more than one country, are complex situations because they involve fiscal costs. The sharing of costs between national governments can easily become the subject of political bickering.

This report is divided into three parts. The first describes the structural changes entailed by the Single Market in financial services, for banks as well as for types of markets. It analyses the risks associated with financial integration and emphasises the importance of endogenous risk, which is underestimated by market participants with inadequate risk control and by supervisory authorities with inadequate coordination mechanisms. The second depicts the current institutional framework and highlights its weaknesses. Thereafter it suggests how this framework can be improved with minimal institutional changes. A two-tier regulatory model can be devised to enhance supervision**,** albeit compatible with tighter financial linkages**,** and to make it the basis of information flows directed to the ECB in its capacity as the European lender of last resort. The third studies how this two-tier framework can be put to work on the three components of the financial safety net: risk prevention, liquidity crisis management, and problem debt resolution. On the first topic, we describe the points where prudential regulation should be extended to match the current stage of financial integration. On the second, we explain why and how the lender of last resort should be considered ~~as~~ an integral part of monetary policy under stressful conditions. On the third**,** we emphasise that fiscal constraints are critical hurdles in solving bank problems. In addition to being the weak side of macroeconomic management in Europe, the lack of fiscal coordination is an impediment in dealing with cross-border bank insolvencies

I. FINANCIAL UNDERPINNINGS OF PRUDENTIAL REGULATION.

The concept of financial integration is multi-dimensional, wherein prudential policy is one of many aspects. Changes in market structures and the organisation of financial firms matter for the changing character of risks. The financial approach of integration is more complicated because it involves financial structures with different characteristics of risk return among replaceable assets. Broadening the range of tradable assets and enhancing their saleability signal progress in financial integration. But so does a higher density of financial flows both within financial conglomerates and among independent financial entities all over Europe.

With regard to the legal environment and corporate control, financial integration meets the obstacle of different national perceptions of optimal policies. Progress in integration requires a shift from closed information systems which favour insiders (French hard-core shareholding knit by government-owned banks, German *hausbanks* and cross-shareholding, Italian government-controlled financial conglomerates) to open information systems. The EC Directives have driven this process for the last fifteen years since the inception of the Single Market project. This sweeping change in perspective requires legal and regulatory structures at the European level, which are still lacking in a number of respects associated with prudential policy. That policy-related institutions lag behind market developments is a recurring theme in European integration.

As hinted at in the introduction, Europe has been pursuing market integration via financial liberalisation at the national level, mutual recognition of national standards and EC directives. It has also successfully completed the major project of establishing a single currency. The present section will provide a summary view of the extent of integration in financial structures. It deals both with financial intermediaries and markets. Enhanced competition and the single currency are significant contributors to the process. For instance, in bond markets, issuing in Euro has triggered the convergence of interest rates in countries in which securities share the same characteristics. Country spreads have become almost negligible compared to firm, sector and time spreads. In turn, competition has eliminated distortions which were due to the partition of national markets. The outcome is a single yield curve across the Eurozone for each class of risks relating to non-speculative grade paper.

To the extent that this process is under way, the present section attempts to address the relevant questions. The first subsection focuses on competition from the point of view of the banking sector. The second subsection shows how securities markets are being reshaped by the dynamics unleashed by the single currency. Not surprisingly, market integration is more advanced in money and bond markets than in equity markets. The third subsection studies how the pattern of risk changes through the combination of risk control systems developed by banks (a global trend), market interdependencies due to financial and monetary integration taken together**,** and the payment system as the infrastructure of the single currency. This latter also reduces the risk of systemic episodes relating to international markets, because foreign exchange crises are no longer part of the drama.

I.1 bank competition and consolidation

The structural change brought about by the adoption of the Euro and the common monetary policy exerts a profound impact upon the financial system in EMU. The changes in bank structures**,** however**,** have yet to alter the basic characteristics of European systems.

a. Persistence in the peculiarities of the European banking system

In the Euro zone the financial system continues to be bank-dominated, at least by comparison to the American, predominantly market-based, system. The proportion of financial assets controlled by banks in EMU countries remains high. Bank loans to Euro-area residents reach about 100 percent of the monetary union GDP, more than twice the equivalent ratio in the

United States, whereas equity and bond market capitalization as a percent of GDP are substantially smaller than in the United States. (Table 1).

Table 1. A European bank-based financial system (EU-11, June 1999)

(In % of GDP)

	Euro area	U.S
Bank deposits	77.8	55.2
Bank loans	100.4	48.4
Outstanding debt securities	88.8	164.6
Stock market capitalization	71.1	163.3

Source: IMF Working Paper (WP/01/28)

Furthermore, unlike in other industrial countries, savings banks and mutual and/or cooperative banks still carry a lot of weight in their local markets, especially at the retail level. The characteristics of these banks partly explain why the retail European banking market is still segmented. Indeed, savings banks often provide credit to customers in their neighbourhood. In many countries, their original purpose was to finance farmers, artisans or other underprivileged groups, which were neglected by private commercial banks. Cooperative or mutual banks are typically owned by their depositors or creditors and their services may be restricted to those who own them, although recent liberalisation has permitted many of these institutions to offer their services to other customers.

b. Increasing competitive pressures on the banking sector

Despite all this, the introduction of the Euro, coupled with liberalisation and deregulation, has substantially increased banking competition. The institutional design of the Single Market and the introduction of the single currency have stimulated a competitive environment for financial intermediaries: better price transparency, much less foreign exchange risk, deeper and more liquid securities markets. Commercial banks have been active using market facilities to transfer their risks via the securitisation of their loans and the hedging in derivatives. They have also embarked upon market trading and other investment banking business, weaving close links with institutional investors.

Increased competition has generated downward pressures on spreads and profitability. The response of financial firms has been to boost their market share in order to offset the erosion in their net interest rate margin with a larger asset base. They have also looked for sources of profit less sensitive to market pressure (underwriting, asset management, designing structured financing for large corporations). Both strategies have led to a wave of mergers and acquisitions by the means of public tender and private cross-shareholding.

Margin falls due to competitive pressures increase the appetite for cross-border ventures. Rather than developing pan-European activities, a sizeable portion of European banks have opted for expansion into neighbouring countries or jurisdictions which share a similar language. For example, Scandinavian banks have expanded into the Nordic and Baltic regions, and Spanish banks into Latin America. Central and Eastern Europe has been an important target for banks

from Germany, Austria, and Italy [ECB annual report 2001]. As a result, the exposure of European banks to emerging markets (Eastern Europe, Latin America end Asia) is high.

c) The differential competitive effects of EMU in retail and wholesale banking markets

Increased competition has had substantially different effects on wholesale and retail markets. The european market for retail banking services (households and small enterprises) continues to be segmented and the degree of cross-border penetration is low. This banking segment remains and will remain very sensitive to «vicinity services»: established branch networks and relationships with customers, and therefore geographical and cultural considerations, will continue to impede entry into retail markets. The substantial cost incurred by retail customers when switching banks poses an additional obstacle. For retail customers and bankers, the relevant market will continue to be local or regional**,** despite the ongoing progress towards financial integration and the capabilities of network technology (e-banking). The importance of sunk costs associated with retail banking relationships - based on the role of brand name**s** and reputation - explains the difficulty of contesting this banking segment.

In contrast**,** wholesale banking markets are already largely international and highly competitive. Monetary unification has triggered further competitive pressures by eliminating competitive advantages partly associated with different national currencies. To take an example, the « anchoring principle », according to which in some EU Member States bond issues may solely be underwritten by domestic financial institutions, will probably include institutions originating anywhere in the Euro-zone**,** or even disappear altogether. Other competitive factors however will be take time to fade away. In M&A activity, for example, knowledge of the applicable accounting, legal and fiscal rules continues to be a local competitive advantage. Certainly, despite some persistent frictions**,** wholesale European banking markets are much more contestable than retail markets.

d. Consolidation and conglomeration

The process of consolidation in Europe has been dominated by domestic mergers. This has caused a significant increase in concentration at the national level, particularly in smaller Member States. As a result, the average share of domestic banking business controlled by the five major banks (CR5) increased from around 50% to 60% over the period from 1990 to 2001. But large differences among individual countries remain and, in that respect, three groups may be discerned: Highly concentrated banking sectors, to be found in small and open economies (Finland, the Netherlands, Belgium, Denmark etc) , medium concentration ratios registered in Austria, France Italy etc., and low-concentrated banking systems (in comparison to E.U. average) in Germany, Luxembourg and the United Kingdom. Germany is the E.U. country with the most dispersed banking system**;** the figure is around 20% [ECB annual report 2001].

Since it has been essentially domestic, bank concentration has favoured the emergence of national champions. In some cases, domestic mergers could be interpreted as a defensive strategy backed by governments for the purpose of defending against potential competition by foreign players. In most cases, however, cost savings appear to have been the driving force. White (1998) observes that the restructuring of the Finnish banking system undertaken after a serious banking crisis, has reduced employment by 32%. Cross-border mergers are limited in the European Union, because labour mobility is low even at the managerial level**,** and political and P.R. support is systematically biased towards domestic and against cross-border mergers (table 2). More generally, cross border cultural differences or conflicting business cultures were often regarded as barriers to cross-border mergers. Moreover, the need to overcome national differences of legal and accounting systems probably increases the integration costs of cross-border mergers**,** and thereby restrains them.

As a result, foreign bank shares of total bank assets, including branches and subsidiaries, are still modest (i.e. less than 10 % in average- 4% in Germany, 7% in Italy 10 % in France). The exceptions are small countries like Belgium, Ireland or Luxembourg.

Another notable characteristic of European consolidation is financial conglomeration. Financial conglomerates combine two or more types of intermediaries (banks, asset-management companies, securities firms and insurance companies). This tendency for financial conglomeration has been permitted by the Second Banking Directive**,** which allows banks in Europe to create financial conglomerates and to hold equity stakes in non-financial firms. The directive allows not only universal banking akin to the German model, but also cross-shareholding between commercial banks, insurance companies and investment banks. In the European Union, bank-insurance entities have become the dominant type of conglomeration. And**,** lately, banks have increasingly merged with securities firms in order to take advantage of the unification of capital markets.

Consolidation has also increased in the area of investment banking. Over the past few years major E.U. banks have reorientated their activities towards investment banking**,** in order to be able to meet a surge in demand for financial services fostered by the expansion of European capital markets. This evolution has been reflected in EU banks' income structure. In 2000, non-interest income, for which investment banking is one of the major sources, accounted for 52% of the total net income (compared with less than 30% in 1996). A large proportion of cross-border mergers took place in the investment banking sector, where independent investment banks (many of them British) were purchased by continental commercial banks. These acquisitions were justified by the wish to achieve rapidly the necessary expertise in securities-based corporate finance and asset management. This phenomenon largely explains the relative importance of merger activity between euro countries and non-euro countries, (n.b. the United Kingdom is not in the euro area).

Table 2. Merger and acquisition activity in the Euro area financial industry (1)

	Same country		Other Euro country		Other non-Euro country		Total	
	Number	Value (2)	Number	Value (2)	Number	Value (2)	Number	Value (2)
Banks-banks								
1998	7	8,445	1	0,147	12	13,787	20	22,379
1999	9	41,242	4	9,465	15	7,495	28	58,202
2000 (3)	3	4,528	0	0	5	11,654	8	16,182
Banks-non bank financial								
1998	4	28,604	1	0,646	3	0,897	8	31,147

1999	3	20,816	1	0,800	12	4,130	16	25,746
2000 (3)	8	4,768	1	1,631	4	0,653	13	7,052

(1) either acquirer or target company is resident in the Euro area. Only completed or pending deals
(2) in millions of US $
(3) January to 10 April 2000
Source: BIS 70th Annual Report, June 2000

e. E.banking

An increasing use of alternative distribution channels by banks to save costs and to reach new customers constitutes a further structural change. Nowadays, the Nordic countries stand out in terms of online banking relative to the size of their population. Norway and Sweden both have a penetration rate (users as share of the population) in excess of 25%, and in Finland more than the third of the population are involved in e-banking. So, more than 30 per cent of all European e-banking customers reside in the Nordic countries and another 22 per cent reside in United Kingdom [OECD, Financial Affairs Division, Occasional paper n°2 2001]. But these countries could be precursors of a more general movement in favour of e-banking. Although branches have remained the main distribution channels, in most E.U countries, banks are developing a multi-channel strategy, combining traditional branch network with the Internet. Following the lead of American and Nordic banks, where both internet usage and internet banking are more developed, virtually all major European banking groups have launched**,** or announced**,** large investment programs or alliances with major telecommunication groups or internet portals from 1999 onwards. So, e-banking opens an opportunity for large banking groups to compete in fields where the high initial cost of traditional brick and mortar branches and the dominant position of national leaders have traditionally acted as barriers to entry. Consequently the development of electronic banking is likely to enlarge cross-border activity and constitute an alternative strategy for foreign expansion.

I.2 Financial markets are poised between fragmentation and integration.

Money, bond and equity markets have been affected differently by the advent of EMU. From the unification of the inter-bank market to the fragmented competition between equity markets, a wide range of consequential outcomes has arisen. As far as debt markets are concerned, a bird's eye view points to improved integration, lower transaction costs and more liquidity.

a. Money markets.

The inter-bank market plays a key role in redistributing liquidity throughout the Euro area. It grew rapidly after the creation of EMU. The share of intra-euro claims in total cross-border inter-bank claims rose from 35% in 1997 to 50% in 2000, according to the BIS. Meanwhile the on-shore Euribor deposit rate replaced the off-shore Euro Libor as the reference rate. This is a two-tier market. A group of large banks trade across borders with one another and serve smaller institutions through national correspondent banking. This structure has preserved robust transaction patterns which, in diffusing liquidity provided by the ECB, have proven resilient under stress in the period following the terrorist attack.

By contrast, the collateralised Repo market is a less integrated segment. Unification has been impeded by national disparities in regulation and market practices relating to securities

lending. Furthermore, clearing and settlement systems in securities transactions are not directly connected to TARGET. Idiosyncratic features in these systems make cross-border transfers complex and costly. Even if technical impediments can be overcome, legal and tax differences, rooted in formal definitions of property rights and in bankruptcy laws, are more profound

b. Bond markets.

-Progress in the bond markets has been notable, even if their total size in the Euro zone is well below the respective size of the US markets (table 3). The breakdown by type of issuers shows that bond financing is still weak in Europe compared to the US and even Japan. Non-financial entities rely on borrowing from intermediaries, while financial institutions raise funds in the bond markets. Banks actively pursue this policy by securitising their loans and buying credit derivatives to transfer their credit risk onto institutional investors via special purpose entities. This structured financing entails the issue of highly rated securities as collateral against the asset-backed securities (ABS) and collateralised debt obligations (CDO) bought by the ultimate investors (mutual funds and insurance companies). This type of indirect securities' financing creates chains of credit risk, which are changing the pattern of risk holding**.**

Integration in debt markets has brought about single yield curves in all countries for both government bonds as well as corporate debt. Government bonds have been converted into Euros since the first day of EMU (January 1st 1999). The process has included outstanding debt as well as new issues. By the second half of 1998, interest rates of the same maturity bonds had already converged**,** with very low spreads. This was an indication that the market was unconcerned about the sustainability and solvency of government debt in participating countries. German bonds provided the benchmark because their market was deeper and broader. The residual spreads result from liquidity differentials, tax treatment and other technical issues. For monetary policy purposes, these factors can be neglected because they are relatively stable. It is as if a single yield curve has been established.

Table 3. Debt outstanding by monetary area

(in billions of dollars and % by type of issuers for each area in year 2000).

Issuers	United States	Euro zone	Japan
Governments and agencies	52.0	45.0	72.7
Financial and institutions	31.8	47.0	15.0
Corporate sector	16.2	8.0	12.3
Total outstanding	16771	7422	6241

Source BIS Working Papers n°100, the impact of the Euro on Europe's financial market, by G.Galati and K.Tsatsaronis, July 2001.

In the market for corporate debt, a continuous yield curve has become established**.** The

shorter range, of up to two years, is under the influence of monetary policy. Instead of using open market operations with Treasury bills, liquidity is provided to banks via repos and periodical auctions. In dealing with commercial banks, the ESCB accepts a large range of eligible private paper of no more than two-year maturity in high-quality corporate securities. Futures contracts on these securities, which are traded in the most liquid markets, provide the benchmark and shape the shorter range of the corporate yield curve. From two to ten years, the benchmark comes from the fixed legs of highly-rated swaps. The reason for benchmark status is that swaps have the lowest credit risk, limited to their replacement cost, because no exchange of principal is involved. Hence the swap market in Euro has gained international benchmark status.

This benchmark is the basis for the market pricing of lower-rate and high-yield bonds that carry credit risk. The quality of this public risk assessment, as contrasted with the private evaluation and monitoring of banks, largely depends upon the quality of the rating agencies. As we shall see in the third part of the paper, this is a weak link in a comprehensive prudential framework based on market discipline.

-Instability in credit spreads can hinder the potential development of bond financing in the corporate sector, which had a lively start in the heyday of investor optimism during the late 90's. Easy credit, conducive to a lower cost of issuing corporate debt associated with high merger and acquisition activity, brought riskier categories of issuers into the market. The resulting larger menu of assets broadened the portfolio of institutional investors. They were offered the opportunity to hold non-investment rate bonds and to take a sectoral approach to diversification across Europe, as opposed to a country approach. The foreign exchange risk being eliminated, they can concentrate on credit counterparty risk with the caveat that the pricing of credit risk needs to be reliable.

c. Equity markets.

Equity prices have been driven more by global and sectoral and less by country-specific factors than before EMU, leading to higher correlation between returns. By contrast, the structure of the trading of securities has been changing only slowly.

The first phenomenon is, however, broader than just resulting from the effects of currency unification in Europe. It has been demonstrated by an IMF study covering a large sample of firms in forty countries [Brooks and Catao, WP 00/216]. Stock markets have become more correlated, especially in crisis periods, particularly in information technology, where a global industry factor far outperforms other factors in explaining return variation.

The attempt to build a pan-European Exchange has failed so far. Consolidation via alliances between national Bourses has shown little progress. The integration of historically independent national markets with well-entrenched interests met high obstacles. For example, the proposed deal between the London Stock Exchange and Deutsche Börse was aborted under pressure from local brokers.

New markets also failed to integrate. Their collapse after the burst of the IT bubble had dramatic effects, with the German Neuer Market closing down, undermining the European Euro-NM. The latter is working hard to eliminate EASDAQ based in Belgium, but is under threat from the launching of NASDAQ Europe. Then all such maneuvers have been terminated by the decline in the market.

I.3 The changing pattern of risks within EMU.

As documented above, financial markets in Europe are undergoing a structural change and are becoming more like the US. This is particularly true of debt markets. Moreover, the

changing pattern of financing in securities markets is stimulating a drastic restructuring of banks. This dual process arises in an adverse environment created by the credit-induced boom-bust cycle in asset markets. In stressful circumstances, bank strategies might well serve to increase their risks instead of diminishing them, or transmitting risks to other financial institutions in complex structures. The combination of market risks and shaky financial structures among banks entails potentially systemic risk. These characteristics will be addressed in turn.

a. The risks involved in bank restructuring.

Consolidation, conglomeration and extension into new business lines mean that the nature of risk is changing in the Euro area, making it more difficult to evaluate the possible repercussion of adverse shocks to financial stability**.**

Facing strong competitive pressures on their traditional income-generating activities, European banks responded by changing the structure of their balance sheets. On the liabilities side, traditional deposits have shrunk (to the benefit of money market mutual funds and other liabilities), while on the assets side they have developed trading activities and securitisation operations. It follows that their profitability has become more sensitive to market performance.

The case of the German banking industry is a good example of this sensitivity. Falling prices on the equity markets and a deterioration in the economic climate have characterised the years 2001-2002. Both factors have created increasing pressures on the profitability of German banks. The decline in Stock market prices has shrunk commission fees. Proprietary trading has turned non-profitable. The rising number of company insolvencies has implied a matching need for risk provisioning. Only the decline in money market rates has allowed traditional banking activities to generate an interest rate margin**,** which has exerted a stabilising influence on banking performance, in so far as customers have demonstrated an increased propensity to deposit their savings with banks. Generally however the return on equity declined significantly.

Table 4 Return on capital of individual categories of German banks

Pre-tax profit for the financial year (in brackets: after tax) as a percentage of the average capital as shown in the balance sheet.

Category of banks	1997	1998	1999	2000	2001
All banks	12,75 (6,47)	19,34 (10,20)	11,22 (6,51)	9,32 (6,07)	6,23 (4,59)
Large commercial banks	7,38 (5,44)	39,51 (19,24)	6,23 (5,48)	6,34 (7,23)	4,96 (5,69)
Land banks	10,90 (5,89)	11,69 (6,54)	10,61 (5,92)	8,14 (4,22)	4,78 (4,01)
Saving Banks	19,37 (6,66)	17,82 (6,52)	15,18 (6,12)	13,39 (6,02)	9,22 (5,08)

Source: Deutsche Bundesbank Monthly Report, September 2002.

The shape of European banking consolidation, primarily involving domestic mergers, exacerbates the «too big to fail» concern because national governments want to protect their

national champions. In some countries, consolidation has created institutions whose liabilities represent a significant fraction of a country's GDP. This «*fait accompli*» potentially complicates the resolution of bank problems. It induces national authorities to adopt an attitude of tolerance whenever they are confronted with insolvent banks. Credit Lyonnais in France and Banesto in Spain epitomise what should not be done in attempting a bank rescue.

But the future could be different. Some observers expect a second phase featuring cross-border mergers [White (1998), Group of ten (2001), BIS (2000)] in search of global banking [BIS Quarterly review march 2002]. If this scenario was to materialise, «too big to fail» policy issues might be viewed differently. Two thorny scenarios could arise which would be prone to conflicts of interest. The first one involves a failure in locally operating branches or subsidiaries of foreign banks, whose consequences are more important for the host country than for the home country. Then the failure of a subsidiary located in a small country, while the bank headquarters are in a large country, will be more problematic for the former than the latter. But according to the current «home country» rule, the workout is the responsibility of the supervisory authorities**,** or the central bank**,** of the large country, which can underestimate the consequences of a failure in the small country. The second scenario stems from cross-border consolidation leading to the emergence of pan-European banks that are large in relation to the European financial system as a whole. The weakness of the European level of supervision will complicate the coordination of national authorities and could delay restructuring of an insolvent mega-bank.

-The E.U.'s Second Banking Directive establishes home country control for the prudential supervision of solvency and of major risks**,** and minimum harmonisation between countries in capital ratio, protection of investors and concentration of risks. So, as emphasized in our scenarios, such a distribution of responsibilities could generate conflicts of interests between the host and home countries.

The rapid growth of financial conglomerates, which cut across banking, securities and insurance sectors from possibly different countries, raises some additional prudential questions. Cross-sector structures and operations may amplify existing risks in one specific sector, as well as create new risks. In relation to these prudential problems**,** linked with the development of financial conglomerates**,** the following problems could arise: inadequate capital coverage, intra-group contagion, large risk exposure hidden in unregulated special purpose vehicles, lack of transparency in legal and managerial structure, supervisory arbitrage. The European Commission, being aware of these «conglomerate» risks, has recently presented a proposal for a directive that would introduce group-wide supervision of financial conglomerates. For the time being**,** however, this proposal does not question the existing institutional and geographic European prudential framework.

b. The nexus of market and credit risks

Since the task of revising the Basel capital adequacy standard has entered the negotiating phase between the official and the financial sectors, the following principles appear to have been accepted: Financial firms should be sensitive to market values and developments in their risk management. Regulatory authorities should impose more stringent prudential requirements. Disclosure and transparency should be substantially improved. Recourse to rating agencies will permit supervisors and the investing community to work hand in hand in order to reward «good» and punish «bad» behaviour.

This theory is based upon a concept of risk which is regarded as a game against nature. Each financial institution is viewed separately on its own. It has to manage its potential losses due to risk factors drawn from its own historical database. This is the meteorological analogy. As Danielsson and Shin put it, «the weather is unaffected by the predictions issued by weather

forecasters and the consequent actions that these forecasters generate.»

In the financial sphere, the technique to ward off really bad weather is the Value-at-Risk (VaR) metric. The largest and most active financial institutions have extended its use from market to credit risk. In tranquil conditions, whereby interactions between market participants do not change much, it is undoubtedly a powerful tool. When safely applied, VaR makes available a common metric to aggregate the impact of unexpected adverse variations via a variety of risk factors. VaR is a probabilistic measure of the potential loss of a given portfolio that cannot be overstepped more than a given percentage of the time within a predetermined horizon. It can be the basis for provisioning against extreme variations of risk factors in the tail of their joint distribution of probability. Therefore Value-at-Risk is a useful complementary measure to risk management at the firm level, after portfolio management has eliminated idiosyncratic risk via diversification and expected systematic risk has been adequately priced through risk premia.

Insofar as the identification of risk factors exogenous to the financial firm is possible and the time-independence of stochastic events relevant, Value-at-Risk can be the fulcrum of internal risk control systems. But this is certainly not a safe assumption all the time.

In stressed situations financial markets exhibit endogenous risk**,** stemming from strategic uncertainty about market participants' individual actions. Since price variations are influenced by their mutually reinforcing actions, shifts in perceptions can magnify market risk. Extreme price variations are the outcome of positive feedback effects, in cases where market liquidity dries up because counterparties are forced out of the market by the pressure of one-way selling.

Consequently, in a stressful environment there is a crucial coordination problem that the market cannot solve. Furthermore, insisting upon the use of internal risk control systems cum market transparency makes markets unstable (Morris and Shin). It is a major error on the part of regulators to believe that market failures result solely from imperfect information. When switching strategies are implemented in a market by reference to a common threshold, transparency reduces the diversity of opinions and thus increases the strength of a uniform move. The use of the same VaR models, which do not make allowance for strategic interactions, causing similar responses to common shocks will trigger an abrupt rise in price volatility (Persaud). In turn, this unexpected change leads VaR calculations to underestimate potential losses due to extreme price variations.

Credit risk is also subject to strategic interaction. A simultaneous deterioration of credit quality amongst a large number of credit institutions often arises in the financial cycle when asset prices turn around after a credit-induced asset price boom has bust**.** An important complementary strategy employed by banks involves their assessment of the migration in credit quality between rating classes. They are all highly pro-cyclical in their judgment. The quality of credit is perceived to be good in the upturn of the business cycle and degraded in the downturn. This common attitude leads to macroeconomic switches in the regime of credit, engineered by strategic interdependence: banks compete to increase their share of credit when their confidence is high, whereas they are quick to shed as much risk as possible when their confidence is low. Therefore in situations whereby strategic interdependencies are frequent, making internal control systems more sensitive to markets and focusing on transparency may well make financial systems more unstable.

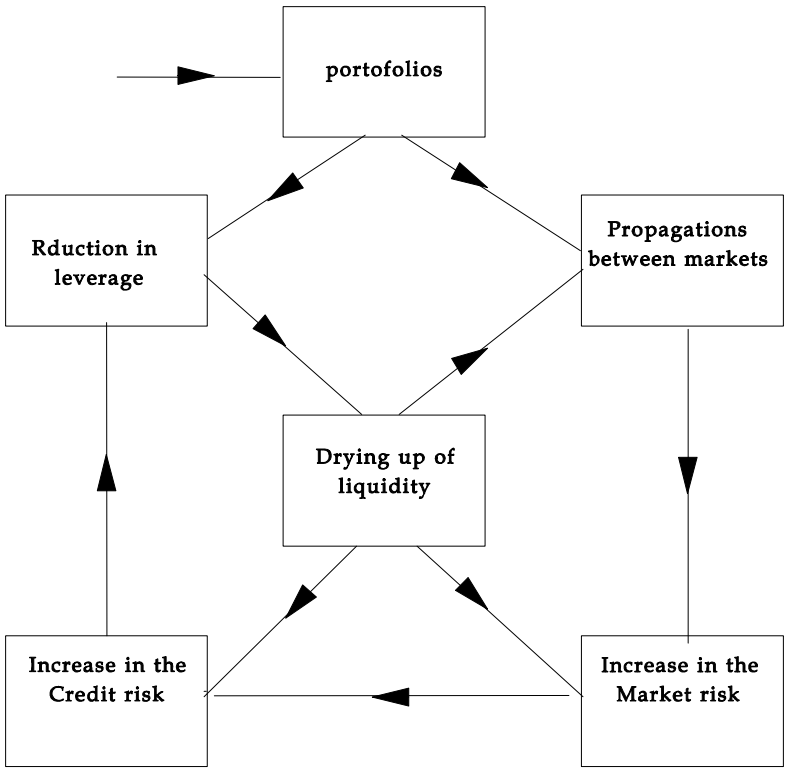
Endogenous risk arises also in the inter-bank market and the underlying payment system. This structure is a network of cross-liabilities which exposes any bank to counterpart risk. Individual bank problems due to exogenous shocks or excessive risk taking can easily reverberate to other banks along a chain of liabilities. A first round of defaults**,** which can be labelled `fundamental'**,** insofar as they proceed from exogenous risk, may spill over into

subsequent waves of contagious defaults via network externalities (Elsinger, Lehar, Summer).

c. From endogenous to systemic risk.

Systemic risk is the probability that an event occurs**,** in an environment of pre-existing financial fragility, acute enough to trigger chain reactions leading to a full-fledged financial crisis. The initiating event is called «systemic» (De Bandt and Hartmann). Examples of systemic events, which would have degenerated into full-blown crises, had not the central banks intervened, include the LTCM failure in September 1998 for financial markets and the terrorist attack of September 2001 for the international interbank market.

Figure 1. A general scheme of contagion processes



Distress sales of assets to reduce leverage and meet to margin calls in the face of collapsing collateral on the part of borrowers**,** and a flight to quality**,** and hedging mechanisms**,** spurring the reallocation of portfolios on the part of investors lead in turn to concerns that market liquidity might dry up. These rational responses at the individual level create positive feedback effects, bringing about a range of bad macroeconomic equilibria, where markets are trapped in and cannot recover on their own. The close ties between banks and non-banks**,** mentioned above**,** are ambiguous as far as feedback effects are concerned. On the one hand, banks can shed part of their credit risk**,** by transferring them to non-banks with fewer liquidity constraints. But on the other hand, they may take advantage of the new devices to lend a higher multiple on a given capital base. Furthermore in severe conditions, when systemic risk as defined above is substantial, the institutional investors which have taken on the credit risk out of the bank balance

sheets might have problems themselves, especially if they also have a large share of their portfolio invested in plummeting assets.

These potential financial disorders are present in Europe. They are concrete threats**,** because financial systems in the different countries have undergone the sweeping changes in financial integration and monetary unification described above. Banks have blended commercial and investment banking. They have also woven close ties with insurance companies and have expanded their facilities worldwide. Feedback effects between credit and market risk can work within financial conglomerates as much as across markets.

Prudential regulation in Europe however is adjusting slowly. It lacks both a commonly accepted theoretical foundation and a common means of implementation. The national separation of regulators has been preserved**,** and a disparity of institutional choices accentuated rather than mitigated. Questions of principle arise as to what cautious regulation can achieve.

There seem to be two layers of active prudential policy. The first is *micro-prudential supervision.* It covers the application of the general banking standards set out by the Basel Committee. But this is not enough. The single market for financial services requires multilateral coordination amongst national supervisors. The second is *macro-management of financial stability*. It is strongly influenced by the single currency. In contrast to the thorny problem of dual crises (banking and foreign exchange), which are situations where the role of the lender of last resort is a matter of controversy in principle, the potential for systemic risk in EMU leads to the inescapable conclusion that the lender of last resort should be centralised. With a single currency the payment system is fully integrated. The operating mechanism of emergency liquidity interventions is the same as the provision of liquidity in normal conditions.

Section II of this paper will describe the state of the art in relation to prudential policy in Europe. We will gauge how far present practices are from the two-tier model, which should provide a structure for a comprehensive financial safety net. This gap is largely due to the vagaries of European politics, which display their weakness in macroeconomic policy as much as in defence and foreign policy. But it is also due to the incompleteness of integration. Such integration is sufficiently advanced to accentuate interdependence of risks between financial markets. Concentration in banking has increased via national mergers. Retail banking faces stiff barriers, which have hindered remote banking services in personal and real estate loans. In these markets, integration does not proceed directly through the financing of borrowers, but indirectly through the transfer of risks in derivative markets. This is the linkage that reinforces the need for a strong macro-management of market disturbances.

II THE INSTITUTIONAL DILEMMA IN DESIGNING AN EUROPEAN-WIDE FINANCIAL SAFETY NET

In Part I we have demonstrated that the current financial landscape in the Euro area includes three main features: integration of markets which increases the risk of the propagation of a liquidity crisis; consolidation of institutions both across product markets and, to a growing extent, across countries; and the creation of very large financial intermediaries which may appear «too big to fail», complicating the resolution of troubled banks. These tendencies raise an obvious question: is the current supervisory structure adequate to stabilise an evolving banking system that has become more concentrated, more integrated and more market-oriented?

This debate about the institutional structure for prudential policy has been going on for years. In EMU it has a national as well as a regional dimension. This two-tier structure complicates the debate. A first-best institutional structure is unattainable. Proposals of reform

must be limited to second-best solutions guided by a pragmatic approach and by a perspective view consistent with current trends in the banking industry and the new risk profile of bank portfolios.

II.1 The current institutional framework for European prudential policy

a. The national decentralization of supervision

The European Union's supervisory and regulatory design is based on the principle of subsidiarity. Consequently, the tasks of banking and financial supervision have been left to domestic agencies. The present European prudential system is grounded on the minimal harmonization of prudential rules**,** as required by the Commission Directives on financial regulation and the mutual recognition of national regulatory standards and practices. Indeed, the second European Directive establishes the control of the home country for supervisory purposes regarding solvency and the prevention of major risks on the one hand, a harmonization of capital standards, risk diversification and investor protection rules on the other hand.

So, bank supervision in the E.U. is based on two related pillars: the principle of mutual recognition between national regulators and the principle of control by the home country. The association of these two principles allows any bank coming under the prudential supervision of one Member State to offer its services throughout the E. U. by means of a single license. The full supervisory responsibility belongs to the home country with just one notable exception -the host country has the competence for monitoring the liquidity of foreign branches. This geographic separation relating to the prudential supervision of financial intermediaries involves «the abandonment of the coincidence between the area of jurisdiction of monetary policy and the area of jurisdiction of banking supervision. The former embraces the countries that have adopted the Euro while the latter remains national.» [Padoa Schioppa 1999]. There is no historical precedent for such a separation between the two public functions of managing the currency and controlling the banks, whose adjustments to monetary impulses constitute a fundamental channel in the transmission of monetary policy.

A single financial market with a plurality of national supervisors requires close cooperation among them to preserve the safety and soundness of the banking industry. But, despite the increased need of such a multilateral cooperation, it remains very weak. Cooperation between banking supervisors takes place essentially on a bilateral base through Memoranda of Understanding (MoU). The key aims of MoUs are to establish a regular exchange of information between pairs of national supervisory authorities in order to supervise efficiently financial institutions that conduct cross-border activities or maintain establishments in foreign countries

Multilateral cooperation is increasingly required to limit and/or to prevent the risks caused by the trend toward larger, more diversified and more internationally oriented financial groups. Unfortunately this mode of co-ordination is underdeveloped. It has been the responsibility of a Group of Contact, which meets periodically to examine problems of common interest. This Group of Contact, founded in 1972, brings together the supervisory authorities of the EC. Its sporadic meetings (three times a year) constitute a form of multilateral cooperation that deals with questions about the implementation of banking regulations and regulatory practices. Since the creation of EMU it has been replaced by the Banking Supervisory Committee of the ECB, where the national regulators of E.U. countries (central banks and other agencies) are represented. This Committee is the main institutional channel which the ECB can

rely on to obtain information regarding the financial system. Its purpose is to promote the smooth exchange of information between the Euro system and national regulators, and close cooperation among national supervisors. It advises the ECB council on issues falling within the competence of national central banks and affecting the stability of financial institutions and markets. But, this Committee does not possess the means to tackle emergency situations, nor is it able to make decisions on emergency liquidity assistance. This Committee, which is without a permanent staff and meets just a few times a year, is dedicated to studying long-run macro-prudential questions. Consequently, the ECB lacks a detailed knowledge of market exposures and spill-over effects in real time that should be available to make an informed diagnosis of a systemic event originating in a particular market.

b. organizational structure of prudential policy at the national level

A review of the decentralized supervisory architecture in Europe raises the question of the optimal institutional structure at the national level. At the present time, each country has a bank supervisory agency which in most cases maintains strong links with the central bank. There are 6 countries in which the central bank is the main banking supervisor (Greece, Ireland, Italy, Spain, Netherlands and Portugal). Banking supervision is run by independent agencies, although in cooperation with the central bank, in Germany, Belgium, Denmark, Finland, Luxembourg, Sweden and the United Kingdom. In France the responsibility is divided between the banking regulator and the central bank. In Austria, a government department is responsible for this task. Supervision of the insurance industry is usually entrusted to a separate institution. Supervision of securities trading is often allocated to the banking supervisor although there are cases where a separate agency is responsible.

Under the European investment services directive, which was implemented in 1996 to level the playing field in prudential regulation between banks and investment firms, investment firms may be brought within the scope of responsibility of bank supervisors. Although there have been cases where the responsibility of bank supervisors has been extended to securities activities, financial supervision in member states remains largely segmented. Some E.U. countries such as the United Kingdom, Finland, Sweden and Denmark have moved to an integrated supervisory authority with consolidated responsibility over the full range of financial intermediaries (banks, insurance companies and investment firms). This reform was primarily a response to a number of financial failures which were arguably caused by weaknesses in the institutional model of supervision. The increasingly blurred boundaries between financial activities also provide a plausible justification of this trend. The United Kingdom offers a prime example. The Bank of England Act, enacted in October 1997, set up the Financial Services Authority (FSA) with responsibility for the supervision of securities markets and other financial intermediaries. In the event of crisis, the Bank of England and the FSA work closely and coordinate their actions. They have signed a Memorandum of Understanding with the UK Treasury defining their respective responsibilities: The signatories agree to share information, in particular the Bank of England is granted rights of complete and free access to supervisory reports, whereas the Treasury retains the right to refuse a bailout action.

Several arguments can be proposed for and against both models of supervision (unified financial supervisor or specialized supervisors) [Abrams R. And Taylor (2000), Goodhart and alii (1997), Goodhart (2000)].

The case for a single supervisory authority relies on several arguments:

i) It can generate economies of scope (or synergies) by pooling the expertise of different functional supervisors and guaranteeing their cooperation. It can also achieve economies of scale through shared resources.

ii) It is an advantage to have a structure that mirrors the business of the regulated financial institutions. A single conglomerate regulator might be able to supervise the full range of an institution's business more effectively and might be able to detect potential solvency problems arising in different**,** but linked**,** parts of the business.

iii) A unified regulator will be able to avoid problems of supervisory arbitrage which occurs when financial institutions are monitored by different authorities despite offering similar products and services, thus promoting competitive neutrality.

iv) A unified agency may respond more effectively to market developments or innovations, because it can introduce regulatory standards which are more flexible than those set out by separate specialized agencies.

v) By reducing the number of authorities and homogenising their structure, cooperation among national supervisors may improve.

The case against a mega-regulator is also quite sensible:

i) The risk profile and the nature of business remain substantially different across sectors and an excessive homogenisation across heterogeneous activities could impair the overall quality of supervision. As a result, economies of scope are likely to be much less significant than economies of scale.

ii) It will be difficult for a unified agency to achieve an appropriate balance between the different objectives of regulation. Significant inconsistencies may emerge within the single agency in relation to the different aspects of regulation (systemic, prudential and protection of the consumer). The lack of clear focus on the objectives and rationale of regulation can undermine the accountability of the institution.

iii) A very powerful supervisor could increase moral hazard if the public assumes that all creditors of any intermediary monitored by a single supervisor receive equal protection. A mega-regulator can create the illusion of an important extension of the safety net and therefore can reduce the incentives for financial institutions to manage their own business prudently.

Be that as it may, it is impossible for the time being to impose a similar institutional solution on all the member states. The institutional design remains a sovereign prerogative. The crucial mechanism for supervising financial conglomerates efficiently is a clear agreement that assigns a lead regulator. At the multilateral level, the Joint Forum on Financial Conglomerates was created in early 1996. This Forum has examined ways to reinforce supervisory coordination, including the criteria to identify a coordinator of the supervisory process. Organising a permanent dialogue between supervisors of banks, investment houses and insurance companies is a second best way to supervise financial conglomerates. It is not a unification of financial prudential policy under the auspices of a European institution .

II.2 Are the existing arrangements adequate?

a. The Brouwer Reports

With the double separation (geographical and functional) between central banking and banking supervision and the absence of any explicit reference to «who is responsible for the European financial system as a whole», concern has been raised about the adequacy of current arrangements for the prevention and management of potentially systemic crises. In response to these doubts, the ECOFIN Council reviewed existing arrangements and concluded that the current design for prudential supervision is largely adequate. This conclusion was based on two

separate reports on financial stability (i.e. the so-called «Brouwer Reports») carried out by a working group of the E.U. Economic and Financial Committee chaired by the Dutch Deputy Governor Henk Brouwer. The first report was published in April 2000 and focused on arrangements for the prevention of financial crises. The second report was published in April 2001 and was dedicated to the management of financial crises. These reports provide a favourable assessment of current arrangements both for the prevention and the management of financial crises. They indicate however that there is still scope for improvement. The main recommendations are the following:

i) Strengthening cross-sector cooperation at the international level and a greater use of a lead supervisor for large cross-border/cross-sector financial groups. More precisely, for the major financial institutions (including conglomerates) which are domiciled in the E.U., agreement should be reached on the lead regulator, defining its responsibilities including information gathering and communication.

ii) Improving the exchange of information on the major financial institutions and market trends amongst different supervisory authorities and between supervisors and central banks. Supervisory authorities should further develop Memoranda of Understanding to deal more concretely with issues related to crisis management, including the procedure for exchanging information when a major financial institution runs into trouble

iii) Ensuring that the risk control systems of banks and other financial entities are able to generate relevant and accurate information on their financial position at short notice. For this purpose, major financial intermediaries should perform stress tests and should share regularly the results with their main supervisors.

iv) Working on the convergence of supervisory practices to enhance the efficiency of supervisors involved in monitoring cross-border financial institutions.

So**,** while the scope for improvement in the functioning of current organisational arrangements is recognized by the Brouwer reports, the arrangements themselves are seen as adequate. This conclusion is**,** however**,** conditional upon the fact that until now the consolidation of financial institutions has largely been confined within national borders. In so doing these reports are, we believe, generally too optimistic and lack a forward-looking view. They underestimate likely structural changes in European financial markets and the potential for systemic risk associated with these trends. They overestimate the ability of present arrangements to deal with the increasing capital market orientation of large, globally connected, financial institutions, where losses can arise and propagate quickly and where responses must be timely to be successful.

b A two-tier regulatory model for Europe.

The foregoing discussion has identified four alternative broad approaches to the structure of prudential regulation: institutional, by a mega-regulator, functional and by objectives -or finalities-. In the institutional approach, regulation is directed at individual financial institutions irrespective of the mix of their businesses. The mega-regulator model is based on the establishment of a single supervisory authority, other than the central bank, with responsibilities over all markets and intermediaries**,** regardless of whether they operate in the banking, financial or insurance sector. The costs and advantages of these two cases were discussed above. The functional approach focuses on the business undertaken by institutions irrespective of which institutions are involved. This approach has the advantage of requiring the same rules to be

applied to all intermediaries who perform the same activity of financial intermediation. It enhances regulatory neutrality. For instance, life insurance is regulated as an activity in the same way regardless of whether banks or insurance companies are conducting the business. The main problem with functional supervision is that the position of the institution as a whole may be difficult to evaluate and control, especially with respect to solvency. The ultimate criterion for devising a structure of regulatory agencies is the effectiveness of regulation in meeting its basic objectives, which can be defined as prudential, systemic and conduct of business finalities.

The organizational structure of prudential policy remains at the national level; and it can easily be argued that supervision of individual institutions is best carried out at the level closest to the financial intermediaries concerned. Member countries have adopted different arrangements but the traditional institutional model is still prominent, even if recent moves to the establishment of mega-regulators have occurred in some countries. No European country has chosen the functional supervision model yet.

Building upon existing arrangements, a two-tier architecture guaranteeing the financial stability in Europe could be devised. The micro-stability objective could continue to be implemented at the national level, with a necessary reinforcement of cooperation between supervisors, both cross-border and cross-sector, applied to complex financial groups. For the implementation of this prudential objective, we agree with the conclusions of the Brouwer reports. It is too early and probably inefficient to create one single mega-European regulator. Nevertheless, the increased potential for contagion resulting from closer linkages among European financial institutions and markets, and the impediments to an efficient coordination process, raise the question of a centralized supervisory agency for systemic concerns. Such a systemic agency could be an independent institution. In that respect, two characteristics of the ECB call for the establishment of close links between this agency and the ECB. First, the ECB has already a mandate to ensure the smooth functioning of the TARGET payments system, which absorbs all financial shocks and provides timely information about inter-bank transfers. Second, the ECB, de facto, would have to play the role of a lender of last resort in the event of a common flight to liquidity. These arguments will be developed in the next section.

In addition to the establishment of an observatory of systemic risk, we propose the creation of an agency for transparency. The reason for such an authority at the European level is the increasing use of market discipline as a driving force towards safety and soundness, complementary to bank supervision and regulation. The Basel Committee of Banking Supervision has proposed a three-pillar approach for strengthening financial stability: regulatory capital standards, bank supervision and market discipline. Effective market discipline depends on market participants having information about the risks and the financial conditions of banks and other financial intermediaries. Market discipline cannot work without some transparency. Transparency in financial intermediation is a prerequisite for stakeholders (equity holders, debt holders and other counterparties), as well as for securities analysts and rating agencies, to assess an institution's current financial conditions, prospects for future earnings and risks. That assessment depends, in turn, on the extent and quality of disclosure, which refers to the public release of information about the individual financial condition and performance of institutions, i.e. the current value of assets and the cash flow requirements associated with liabilities. It also relies on information about risk exposures, risk management processes, control procedures and business strategies.

Markets are characterised by a chronic tendency to under-supply information for effective financial discipline. The main reason is easy to understand: the costs of producing information are concentrated while the benefits are diffused and not easily appropriated by the producers. There is a conflict of interest between users and suppliers of funds regarding the production of

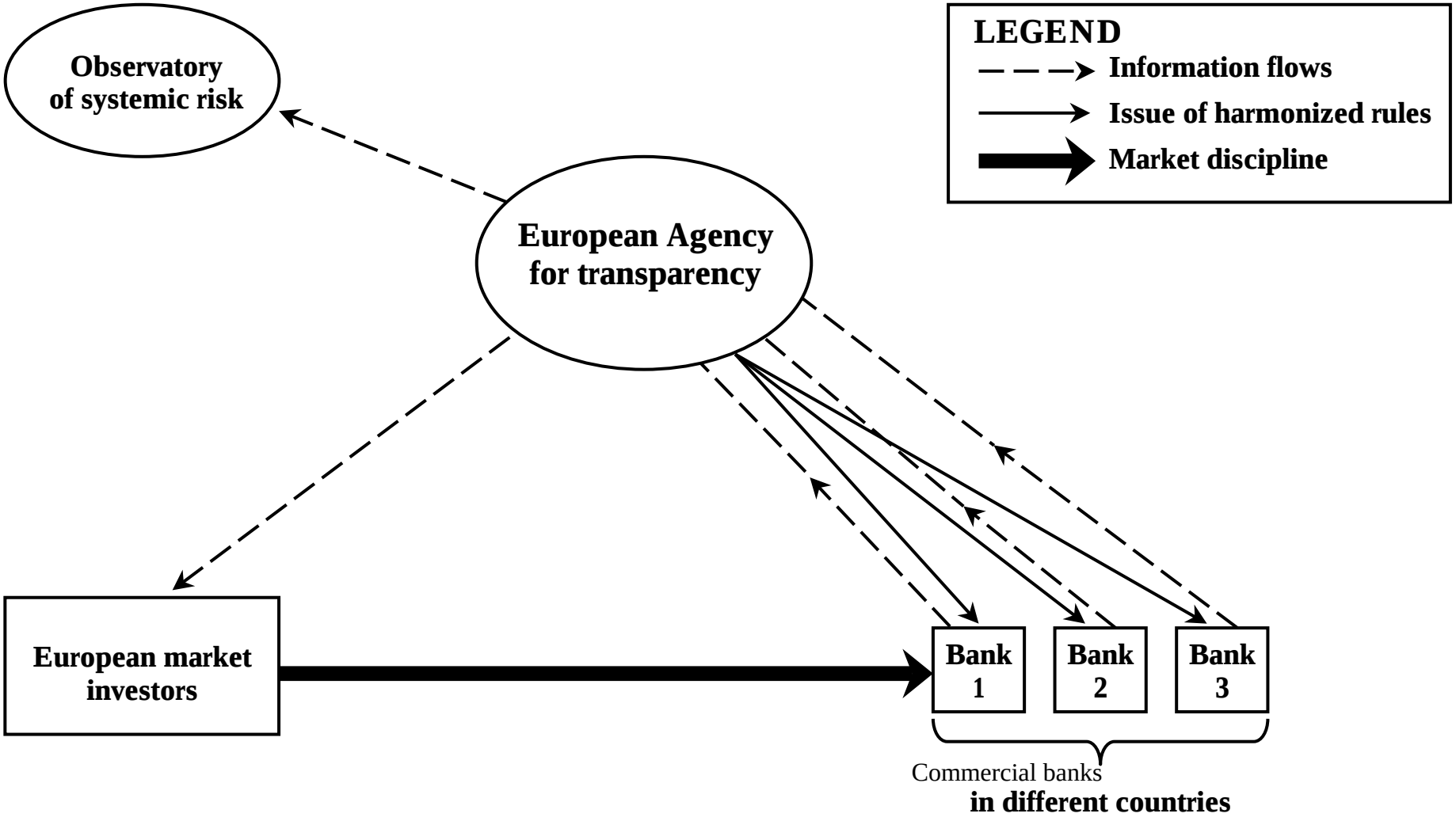
relevant information. Increasing competitive pressures exacerbate this antagonism. The gap between individual and collective interests typically leads to public intervention. That is why disclosure practices in banking are shaped by regulation. Regulatory standards apply to publicly available financial statements and other financial information, as well as to bank regulatory reports. Enhancing the process of disclosure is within the remit of standard setting agencies. For that reason, an agency at the European level should be created with responsibility for assessing and extending transparency, the protection of investors, and disclosure requirements of financial intermediaries, as well as the harmonisation of rules in this field. The proposed authority could set out standards of market discipline for the entire single market, and thereby drastically limit competitive distortions due to different national disclosure requirements (figure 2).

II.3 Links between financial supervision and the lender of last resort.

As regards liquidity assistance to financial systems, the role of central banks has evolved over time. In the XIX° century, central banks were privately owned and not considered as such a leader by the financial community, because they were competitors in the loan market. Moreover, the notion of prudential policy was unknown. The need for emergency liquidity under stress emerged, however, after the devastating financial crisis of 1867 in London. Bagehot's influential writings raised awareness of the special responsibility of the Bank of England at a time of crisis. The first trend towards financial globalization, over the next forty years until 1913, occurred at the same time as the concept of the lender of last resort was accepted in the most financially advanced countries of Europe, in stark contrast with the US.

In the interwar period, the hands-off policy of the Fed in the midst of widespread bank distress greatly worsened the great depression, which destroyed the international financial system. National systems were overhauled, with the application of strict banking regulations and foreign capital controls. They thrived until well after World War II and allowed the high growth regime to be easily financed. Since the potential for financial crisis was mainly concentrated in large banks and systemic risk could arise only in the inter-bank market, the principle of *«too big to fail»* became generally accepted. Moral hazard was counteracted by interest rate regulation, credit control and bank supervision. Consequently banking policy was separated from monetary policy.

A FRAMEWORK FOR AN EFFECTIVE TRANSPARENCY IN THE EUROPEAN FINANCIAL SYSTEM



The second trend towards financial globalization started in the early 1980's, and has continued to affect financial markets for nearly two decades. It has undermined banking policy by blurring the dividing lines in financial intermediation. The *«too big to fail»* principle has not receded. But at critical times, central banks have had to extend their umbrella to wider areas of finance. This has entailed a twin shift in the position of central banks. On the one hand, they have retreated from direct responsibility in supervisory activities, as documented above. On the other hand, concern about macro-financial stability has surfaced again in the design of monetary policy.

In cases where a central bank has maintained an overall responsibility regarding financial stability, while simultaneously being deprived of supervisory responsibility *stricto sensu*, complicated relationships have arisen. This has led to tension between the function of the lender of last resort(LOLR), which has the money-creating power, and the function of the supervisory authorities, which have the information, and also the government, which can be affected by crisis management. A network of communication must be carefully designed.

In EMU an additional layer of complexity arises. There are national central banks which are part of the ESCB, national governments with fiscal authority; no central budget for restructuring financial firms, large disparities in national supervisory systems. Against this background, which makes it difficult to handle European-wide systemic risk, the Maastricht treaty has been reluctant to grant the ECB a LOLR role.

The causes of this are twofold, and were already mentioned in the introduction. The first reason is doctrinal. In Continental Europe, monetary authorities have a different view from Anglo-Saxon countries, because financial intermediaries, (rather than markets), play the dominant role. An uncompromising monetarism was supported for much longer in the former countries. There was a fear that an unambiguous LOLR responsibility would undermine the overriding principle of price stability. Therefore *ambiguity* was claimed to be constructive, especially to ward off moral hazard. The second reason is political and embodied in the concept of *subsidiarity*, according to which banking crises at the national level must be dealt with inside national borders. It also suited the privileges of national central banks which were eager to retain as many independent functions as possible. They were backed by national governments, which were reluctant to abandon their upper hand in bank restructuring insofar as national interests were at stake, and there were also fiscal implications.

The recognition, however, of the need for a LOLR responsibility at the ECB is crucial for maintaining financial stability. This was demonstrated in the aftermath of the systemic event triggered by the 2001 terrorist attack, which will be discussed in section III.2. In that respect, a number of questions arises: on what principles should the LOLR function be performed? Who should take the initiative? How should the relevant information be transmitted?

a. Principles underlying a comprehensive framework.

National central bankers argue that they should retain their full prerogatives at times of crisis because, in their view, financial instability can be handled in, and confined to, a single country. Were their view to be justified, it would greatly reduce the need for gathering information, and sharing burdens, and would simplify decision-making. However, in an integrated financial system, the national central bankers' version of the principle of subsidiarity is only compatible with an unlikely combination of effective supervision of financial institutions at the national level, and perfect capital markets linking those institutions in EMU. But recent financial history has shown that markets are prone to endogenous risk when cross-border counterparties are involved. Liquidity shortages in these European-wide markets cannot be handled by a national central bank alone.

From this it follows that ~~a~~ national autonomy in prudential policy is compatible with the efficiency of the European financial system under normal conditions, but it is not consistent with safety in cases of systemic risk. Table 5 contains a summary of necessary changes to prudential policy to ensure the safety of financial systems which move from separation to integration.

Table 5: Types of prudential policy in Europe

Type 1 Autonomy + Safety	Type 2 Autonomy + Efficiency	Type 3 Safety + Efficiency
Ways and Means of prudential regulation : _ Capital controls _ National supervision and LOLR _ Minimal coordination on cross-border payment systems	Ways and Means of prudential regulation : _ Partial harmonization of prudential standards _ Heterogeneous models for the supervision of banks and other financial institutions _ Bilateral episodic cooperation structured in Memoranda of Understanding	Ways and Means of prudential regulation : _ Network of national supervisors coordinated in the Banking Supervision Committee _ A Pan-European observatory of systemic risk _ The **ECB** as the lender of last resort
Financial systems prior to the Single Market	Financial liberalization and integration since the launching of the Single Market to EMU	Monetary and Financial Integration in EMU

Despite the abolition of capital controls and progress in financial liberalization from the mid-80's onwards, prudential regulation has lagged behind. Type 2 fragile financial systems originated in the late 80's. In the early 90's, asset market-induced banking crises erupted in nearly every European country. The symptoms of inefficient prudential policy, which sacrificed financial safety at high social cost, were inadequate bank supervision, excessive tolerance, and hesitation in resolving the insolvency problems of credit institutions. In stimulating the integration of financial markets and the deeper involvement of banks in financial markets, the advent of EMU raises even greater financial safety concerns. A move towards type 3 prudential regulation must be on the agenda, in spite of national supervisors and central bankers pleading for inaction to preserve their national *acquis.*

b. Conducting lender-of-last-resort operations

Drawing from the first section of this paper, financial crisis management should adopt a European perspective in the following circumstances:

- A general deterioration in financial conditions causing a massive loss of liquidity, as occurred in dollar markets in 1998 after the Russian bankruptcy.

- A large bank failure**,** or multiple failures in the banking sector, which trigger externalities through payment systems or securities markets and create endemic financial fragility.

- A crash in a securities or derivatives market, which brings a need for liquidity injections, and causes a deterioration in bank balance sheets via margin calls, capital requirements and collapses in collateral values.

In these cases the responsibility of the ESCB as the lender of last resort for EMU should be acknowledged and never doubted. On the contrary, allocating the LOLR function to national central banks, on their own responsibility and on an *ad hoc* basis, is utterly inappropriate in the light of the close implications of the LOLR function for monetary policy. Regardless of who is to technically perform the liquidity injection, the ESCB should always retain the power of final decision. Ultimate decision-making responsibility should therefore be vested on the Governing Council of ECB which should have emergency powers to activate LOLR facilities.

Depending upon the type of financial crisis, the process may be initiated in a particular country, or financial centre. The unfolding crisis may also be detected through a deterioration of general financial conditions. In the first two instances, the Council should be able to rely upon well-run information lines and be entitled to ask supervisory institutions to supply any information required for an accurate diagnosis. Timely reaction is of the essence in a successful LOLR intervention**,** and for that reason ECB managers should be informed of financial anomalies from the very outset.

As far as operational responsibilities are concerned, intervention to inject (or to remove**)** liquidity can be either carried out by the ECB or by one or several national central banks after the decision to intervene has been made by the ECB Governing council**,** and the procedure has been agreed upon in detail.

Widespread systemic episodes, which may disturb a large number of markets and impinge on macroeconomic conditions, may require full centralisation**,** because the ECB alone can restore market confidence.

A severe disruption of a specific securities or a derivatives market, which may potentially entail «spill-over» effects through portfolio management and dynamic hedging by market intermediaries, is a threat, which can be better contained within the disturbed market. If the market is located in a given financial centre or if well-identified market makers have to be supported, a specific national central bank may be better equipped than others to deal with the event. Depending on the market in question, the central bank can intervene with direct open market operations, lending to market makers or providing guarantees to banks that extend credit lines to the market makers. The central bank, operating on behalf of the ESCB and under instruction issued by the Governing Council, may eventually broaden the range of acceptable collateral to secure its funds.

Emergency liquidity assistance to an individual financial institution, justified by its

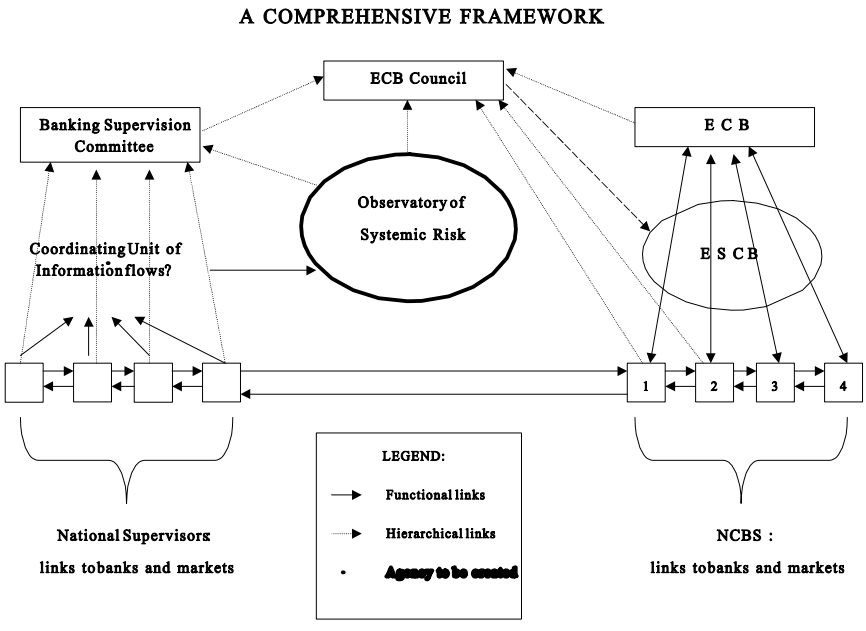
critical systemic position, can be dealt with by the central bank of its home country or by the central bank of the country where the problem is located. In any case, the power to decide rests with the ECB council. Rescue operations of that kind are not frequent and for that reason the intervention could rely on standing facilities, a marginal-lending facility suitable for emergency lending or a US-style discount window.

In any case, transnational externalities**,** involving systemic risk in a single monetary area can only be internalised by a systemic regulator at the transnational level, namely the European System of Central Banks. Marginal facilities are preferred because they use the same channel which is used to supply very short run financing in the inter-bank settlement system. The transactions between commercial banks and central banks of the ESCB are collateralised repos rather than outright purchases of securities. It is closer to the operating procedures of liquidity provision because monetary policy does not use open market operations. Liquidity is supplied to the banking system via a large range of private paper. In emergency situations, the heads of the ECB can always decide to broaden the range of eligible paper and instruct any of the national central banks to conduct similar repo transactions if needed.

c. A supportive environment for the lender of last resort.

To deal with developing crises, the ESCB must be able to operate an extensive network of communication among various institutions at the national and European level. Figure 2 depicts such a comprehensive framework.

Figure 3. Designing a crisis management system



Part of the framework results from our earlier analysis in this section. Bank and market supervisors are now often distinct from central banks for reasons indicated in our discussion of the present doctrinal foundations of supervision. We have also advocated a two-tier system of supervision. Hence, figure 2 describes the lines of horizontal communication both within a

country and between countries. It also depicts vertical lines of communication. On the side of supervision, national supervisors are coordinated under the authority of the European Bank Supervision Committee whose powers should be substantially enlarged. It should be endowed with permanent staff with responsibility to coordinate the collection, processing and aggregation of information supplied by national supervisors. Regarding the central banks, the two-tier organisation is embodied in the structure of the ESCB.

The significant innovation that we propose**,** in figure 3**,** is the creation of an observatory of systemic risk at the European level. An observatory of systemic risk would be particularly useful precisely because we know very little of the details of the process of contagion, the weak links in financial conglomerates, the preliminary indicators of market liquidity shortages and the process of deterioration of market confidence. The ECB Governing Council would greatly benefit from an agency capable of following, understanding and interpreting European-wide market developments. It would also enhance the reliability of the diagnosis of an unfolding systemic event.

With access to information generated in financial centres and transmitted to national central banks and supervisors, the observatory would be in a position to assess the consolidated exposure of the main market makers with operations in several integrated markets. Normally, the observatory would work as a warning agency and a research centre on the implications for systemic risk of the development of financial markets in Europe. In times of crisis, the observatory would assist the ECB board and council of governors to arrive at a diagnosis and work out a mode of intervention to deal with a liquidity crisis at the most appropriate ~~impact~~ point. It could also help the Council to coordinate rescue operations for major bank failures involving more than one country and central bank.

III POLICY ISSUES IN STRENTHENING PRUDENTIAL MANAGEMENT IN EUROPE.

Policy issues traditionally distinguish between crisis prevention and crisis management. Prevention can further be separated into market discipline and supervision. Market discipline is enhanced by the quality and the availability of information to market participants. In this respect the role of rating agencies is crucial, but they have considerable weaknesses**;** and policies which would induce them to improve their performance need emphasis. Supervision involves fieldwork, especially with the never-ending revisions to capital standards**.** The introduction of prompt corrective action in the USA, as part of the reform of the Federal Deposit Insurance system, has been well-designed, and could beneficially be copied elsewhere**.** Crisis management can also be separated into the provision of lender-of-last-resort facilities and the resolution of bank problems. With regard to the former, the changing function of the lender of last resort in a market-led financial system should be emphasised. The latter involves the expenditure of public funds and**,** therefore, we ought to stress the lack of a federal budget and the artificial restraints of the stability pact.

III .1 Risk prevention: capital provision, rating agencies, insurance deposit schemes.

In this subsection we focus on the elements of micro-prudential policy which are most susceptible to change, either because reform is under way (capital provision) or because a significant improvement is much needed (rating agencies and deposit insurance).

a. European Deposit Insurance

The 1994 European directive on deposit insurance mandated the creation of a formal system of deposit insurance meeting certain minimum criteria before 1995. The obligation of EU member states to introduce a clearly defined deposit insurance scheme, (entailing the mandatory participation of banks and the requirement for a minimum level of guarantee of Euro 20 000_ per individual) is a major achievement. In response to the Directive, three countries (Greece, Portugal and Sweden), which did not have any system before, introduced deposit insurance and four countries (Belgium, Ireland, Luxembourg and the Netherland), which had a coverage lower than 20 000 euros, raised it. None of the EU Schemes guarantees inter-bank deposits. In effect, corporate deposits, which normally much exceed the limit of 20000, are also outside the scope of mandatory protection (table 6).

These harmonised standards**,** however**,** do not suffice to ensure the soundness of the European deposit insurance system. The Directive does not impose requirements relating to ex-ante funding, public or private administration, a risk-based premium system, etc. And yet, the introduction of the single European currency and a common prudential policy at the EU level require the establishment of a well-designed deposit insurance system.

The principles of home country regulation and mutual recognition- subject to minimum standards - are the backbone of EU banking regulation, including deposit insurance. Further progress can however be made. For instance, the EU deposit insurance directive does not determine whether the deposit insurance should be organised by a public or a private institution. The amount of the deposit insurance premium is also not prescribed. The lack of harmonisation in those cases may stimulate international regulatory competition, whereby the amount of mandatory deposit insurance premium becomes the subject of competition among EU countries. In the implementation of the first and second banking directives, EU banks enjoy the right of establishment and freedom to provide financial services throughout Europe. A permanent physical establishment in the recipient country may take the form of either a branch or a subsidiary. According to the Deposit Insurance Directive, overseas branches are within the scope of application of «home country» deposit insurance schemes, whereas overseas subsidiaries must join the scheme of the host country. In other words, overseas branches operate under a different deposit insurance scheme than their domestic competitors. This rule may trigger regulatory competition in the field of deposit insurance in Europe. Deposits in overseas branches are recorded as external liabilities of the home country of the bank, although from the perspective of the depositor they constitute domestic deposits. In addition to the regulatory distortion, which is caused by this accounting peculiarity, the «home country» is put in position of competitive advantage vis-à-vis the «host» jurisdiction.

In the absence of fiscal federalism, a federal deposit insurance system is not conceivable. It is nevertheless possible to impose a public system of deposit insurance as opposed to the current situation whereby member states may choose between a privately-run insurance system, managed by banks**,** and a state-managed system. Similarly, it is conceivable and desirable to impose an *ex-ante* financing scheme as well as a risk-based premium system. *Ex-post* financing systems, whereby financial institutions contribute funds after a bank failure, are generally favoured by banks but they do not provide appropriate incentives regarding the basis for calculating the premium amounts. Among the possible techniques for adjusting premia to risks, a plausible option would be to link the criteria of capitalisation and rating. This is the approach applied in the U.S by the F.D.I.C. These proposed three adjustments of the Deposit Insurance Directive would be essential, if the responsibilities of deposit insurance funds vis-à-vis rescue operations were to be extended. This approach is justified by the burden imposed on insurance funds in cases of bank failure.

Table 6: Deposit Insurance System features in EU countries

Countries	First established	Coverage limit (in Euros)	Foreign currency deposits covered	Interbank deposits covered	Status	Funding
Austria	1979	20 000	No	No	Private	Unfunded
Belgium	1974	20 000	No	No	Mixed (private/public)	Funded

Denmark	1988	40 000	Yes	No	Private	Funded
Finland	1999	25 000	Yes	No	Private	Funded
France	1980 (i)	70 000	No	No	Private	Funded
Germany	1966	20 000	Yes	No	Private/equivalent	Funded
Greece	1995	20 000	No	No	Public/private	Funded
Ireland	1989	20 000(ii)	No	No	Public	Funded
Italy	1987	103 000	Yes	No	Private	Unfunded
Luxembourg	1989	20 000			Private	
Netherland	1979	20 000	Yes	No	Private	Unfunded
Portugal	1995	25 000	Yes	No	Public/private	Funded
Spain	1977	20 000	No	No	Mixed	Funded
Sweden	1996	25 000	Yes	No	Public	Funded
U-K	1982	22 000	No	No	Public	Mixed (iii)

reformed in 1999.

The public scheme provides a coverage up to _20000, but the private scheme(on a voluntary basis) provides a coverage up to 0.3%of the available capital of the bank for each depositor.

There is an initial contribution and ex-post funding when needed.

Sources :- Reint Gropp and Jukka Vesala, 2001, Deposit Insurance and moral hazard: does the counterfactual matter ?, March , European Central Bank, Working Paper N°47- Agnes Belaisch, Laura Kodres, Joaquim Levy and Angel Ubide, 2001, Euro-Area Banking at the Crossroads, IMF Working Paper, March, WP/01/28.- Charles Cornut, 2000, Le Fonds de garantie des dépôts, Revue d'Economie Financière, N°60.

b. Capital Provision.

The proposal of the Basel Committee of Banking Supervision (1999-2001)**,** and the equivalent one of the European Commission (1999-2001)**,** are divided into three « pillars ». Pillar I deals with changes to the current framework regarding the calculation of minimum regulatory capital requirements. The new method purports to achieve a better alignment of capital with the actual risk profile of banking activities. The new framework maintains the current definition of capital**,** as well as the minimum requirement of an 8% ratio of capital to risk-weighted assets. The reform focuses on improvements in the measurement of risks, i.e. the calculation of the denominator of the capital ratio. The measurement of market risk is not addressed. The main aspects of the project relate to the treatment of credit risk and the incorporation of a measurement for operational risk. The current computation method for risk-weighted assets is highly conventional and mechanistic. Individual risk weightings depend on broad categories of

borrowers - i.e. sovereigns (with a distinction between OECD members and non-members), banks or corporate entities -. The risk-sensitivity of the reformed framework will be enhanced. For the measurement of credit risk two options have been proposed: the standardised approach (S.A.) and the internal ratings-based approach (IRBA). For the former, risk weightings are to be refined by reference to a rating provided by an external credit assessment institution, i.e. a rating agency. For instance, for corporate lending, the existing accord provides only one risk weighting category of 100%, but the standard approach will provide four categories (20%, 50%, 100% and 150%). In relation to the latter, under the new proposals banks will be allowed to assess the credit risk profile of their portfolios by using their own internal ratings of borrower creditworthiness, subject to supervisory approval. This approach is further divided into two options: the foundation approach and the advanced approach, which relies even more on the institutions' own estimates of the risk profile of their credit portfolios.

Pillar II purports to upgrade the process of supervisory review. Supervisors are required to understand precisely how banks handle internal processes of risk management and allocation of capital. Supervisors will be responsible for assessing whether the bank's internal process of capital measurement reflects its individual risk profile. If**,** in the supervisor's view**,** the internal process fails to accurately reflect the actual risks, supervisors are given the power to set a higher standard than the minimum capital requirement. So one consequence of the revision to the 1988 accord - the so-called Cooke ratio - will be a drastic change in the nature of bank control. The practical advantage of the Cooke ratio is its simple, almost rudimentary, nature: The supervisor's task is to verify the adequacy of the level of regulatory capital vis-à-vis the designated risk-weighted assets. Under the new ratio, supervisors will be less concerned with the verification of compliance with capital standards and more concerned with the assessment of the quality of internal bank models and control processes. They will ideally become experts in internal bank control. Due to the high degree of financial integration in Europe, supervisors should adopt common methods of validation to avoid the risk of competitive distortions due to heterogeneous criteria for assessing internal models.

Pillar III purports to improve market discipline by means of enhanced disclosure on the part of credit institutions. It is hoped that improved standards of disclosure will enhance the soundness of the overall framework. There may be**,** however**,** potentially adverse effects, which should not be underestimated. At the macro-economic level, more sensitive capital requirements could produce pro-cyclical effects which would exacerbate business fluctuations. In practice, after an adverse shock to demand, banks would have to adjust their cyclical loan losses and the resulting decline in their capital by rationing available credit. Effects of that type would occur in part because banks' internal models of risk assessment are not suitable for handling endogenous risks which are produced from individual banks' own reaction to deteriorating asset quality. At the microeconomic level, banks could use an IRBA subject to supervisory approval on a voluntary basis. Potentially, this entails a risk of sub-optimal selection of the employed internal method of rating, which may lead to a deterioration of aggregate capital levels in the banking system. Thus the internal rating-based approached may be used solely by those institutions, which would benefit therefrom in terms of reduced capital requirements, whereas the remainder will opt for the standardised approach.

c. rating agencies

As a result of this capital standard reform, the demand for external credit ratings will rise, particularly if the use of the IRBA remains limited. Those developments will substantially enhance the influence of rating agencies in prudential issues. Already, a growing number of regulators systematically base their estimates of bank solvency on external ratings. The dissemination of information for prudential purposes demonstrates the *de facto* contribution of

rating agencies to market efficiency. Rating agencies are known to reduce informational asymmetries between lenders and borrowers**,** as well as the costs of obtaining information. This role matches one of the pillars of the new international prudential framework, namely the improvement of practices of corporate disclosure. Market discipline may be achieved only if critical information is accessible to all market players. The benefits of enhanced disclosure also rely on the existence of well-informed observers of financial markets. Were regulators to approve of the opinion of rating agencies, investors would probably regard the agency's assessment as a benchmark akin to a public good.

Under the new prudential framework, the role of rating agencies could be even more important. The assessment of internal methods of control will extend beyond the quality of the models employed into other questions, including the involvement of senior management, the separation between operating and auditing functions**,** and the existence of checks and balances at all levels of the organisation. Supervisors will also ascertain whether operational risks which may be attributed to organisational deficiencies have been addressed. A number of bank crises, particularly in derivatives markets, originated in sub-optimal organisational arrangements which failed to provide a dual level of control for the execution and the settlement of transactions. Deficiencies of that kind create opportunities for fraud and hiding losses. The failure of Barings Bank is a textbook case.

Whether rating agencies are able to assess the quality of the organisational aspects of internal control is questionable at present. On many occasions, rating agencies have failed to perform their functions adequately because they have used market prices as indicators of soundness rather than carrying out a more profound analysis. In those cases, the view of rating agencies is a mere reflection of market perceptions and for that reason ~~it~~ is of questionable quality for prudential purposes. The oligopolistic structure of the ratings market and the fact that their fees are paid by the very subjects of assessment raise obvious questions of conflicting interests and collusive practices.

It follows that the enhanced role of rating agencies in the performance of prudential control should be complemented by substantial reform in their status and operations**,** due to the virtually «public good» nature of their services. To prevent conflicts of interest relating to the reliance of rating agencies on audited financial institutions, the former should be afforded the status of quasi-public institutions with ultimate accountability to prudential authorities. Their activity should be financed by a tax paid by all credit institutions. The proposed reform would break the problematic mutual reliance between the examiner and the examinee. As corollary, recourse to rating agencies should be made compulsory**,** regardless of the size and the range of business of credit institutions.

The proposed reform should be implemented at the European level. For a number of reasons, the emergence of European rating agencies has to be encouraged by a European accreditation system under the authority of European supervisors. These are several arguments for having a specifically European agency, or agencies. The further integration of European financial markets will require the ratings agencies to maintain permanent contacts with European private agents. It is essential for the ratings agencies to enhance their understanding of the microstructure of markets and to acquire a more profound expertise on the variety of European accounting methods. Last but not least, the accreditation of European agencies is also necessary from the point of view of multi-ratings, which are currently dominated by the duopoly formed by the two leading North American agencies.

III.2. Crisis management: the multi-faceted lender of last resort.

As demonstrated in the first section, systemic risk may be due to the operations of large value payment and settlement systems, to substantial losses within a global financial group and to liquidity shortages in a financial market. Any of those episodes is capable of spreading across borders and national jurisdictions. It is rarely understood in the academic literature that financial globalisation has altered the LOLR role of central banks. The debate is still conducted in the usual Bagehotian way of responding to liquidity problems of individual banks; hence the endless controversy of illiquidity versus insolvency, social cost of not rescuing versus moral hazard. Such circumstances occurred in the savings and loans crisis of the 1980s. But in contemporary finance, there has been no example of contagion triggered by bank runs either in Europe or the US. There has been however a significant shock in the inter-bank payment system after September 11, 2001. And lately there has been a significant deterioration of liquidity in financial markets. In short, lending as a last resort is becoming a matter of monetary policy rather than a matter of banking policy. On the other hand, banking crises are essentially the outcome of solvency problems and will be treated as such in the last part of the paper.

If the LOLR function constitutes an aspect of monetary policy under stress in unstable financial markets, the separation between micro supervision and the provision of macro stability is legitimate. But so is the network of communication advocated in figure 1, to the extent that banks are market makers in financial markets.

a. *Maintaining the payment system as a public good.*

The unique position of central banks in payment systems is uncontroversial, but its implications are often forgotten. As far as central banks provide the ultimate means of settlement, they have a significant impact on commercial banks. To the extent that a failure in settlement entails systemic risk through the chain of inter-bank debts, the lender-of-last-resort function in this respect is organically linked to the hierarchical structure of the payment system. In the event of unfolding settlement failure, central banks are the sole institutions which are capable of instantly extending indefinite sources of liquidity in order to preserve payment finality.

The breakdown of vital communication links after the terrorist attack on New York City illustrated the point. Furthermore it revealed a dramatic instance of cooperation between the Fed and the ECB. The immediately arranged intervention was unprecedented in size. The Fed intervened both in the Fed Funds market and at the discount window. It supplied liquidity to banks, which while under obligation to pay were unable to do so because the funds they were due to receive had not arrived. The sums that had to be disbursed in central bank money were much greater than the daily amounts which central banks routinely inject into the system. Had it not been for the massive overflow of central bank liquidity, the overnight inter-bank market rate would have exploded. Instead, it slumped virtually to zero, which is a clear indication that the intervention was virtually unlimited.

The LOLR rescue continued throughout the week following the catastrophe. The Fed injected between $36 and $81 billions into the banking system each and every day between 12 and 19 September, compared to an average of $5 billions on a normal day. European banks, which were not receiving the payment flows that they were due, lacked the currency that would allow them to make their own payments. The banks' need for currency convinced the ECB to make its first exceptional injection of liquidity on the morning of September 12. Several others throughout the week followed this. All in all, the ECB added _130 billions to the banking system via emergency tenders. In the meantime, acting via the national central banks, the ECB agreed on

a 30-day $50 billion swap with the Fed to supply European banks with dollars.

This was one aspect of the crisis management. Another aspect involved monetary policy. Because the September 11 catastrophe took place against a backdrop of financial fragility, there were fears that the market would collapse. The Fed had already shown that it was determined to contain the weakness of Stock markets and not allow credit quality to deteriorate across the board. The decisive action took place on September 17, the day Wall Street reopened. Before the opening Alan Greenspan announced a 0.50 cut in the Fed Funds rate. Shortly after (at 5:30 p.m. local time) the ECB cut its refinancing rate by the same percentage. This episode confirms how efficient last resort lending can be in containing global liquidity crises.

b. Restoring confidence in financial markets.

The aftermath of the Russian moratorium, aggravated by the LTCM episode, depicts another type of systemic risk. The Russian crisis revealed that global financial markets are vulnerable to the loss of benchmarks from which financial assets are priced. The crisis regarding private securities spread remarkably fast from one market to another. The starting point was the end of August to mid-September1998 when the enormous losses of LTCM became public. At that point, the collapse of confidence dramatically raised liquidity preference**,** so much so that the core of the banking system was threatened. The crisis was demonstrated by the TED spread which tripled in two weeks. Asset holders rushed to sell all kinds of negotiable private claims**,** and fled to the Treasury bill market. At the end of September it had become virtually impossible for private borrowers to find new credit. Such a disorderly state of affairs in US capital markets was obviously a systemic event and justified the intervention of the lender of last resort.

The Fed was highly successful in restoring confidence. This successful intervention demonstrated that the impact of LOLR on markets under acute stress can be highly discretionary in intent, unforeseen by market participants and irreversible in its effects. By contrast, this episode outlines the weaknesses of the existing design in the management of macro-financial stability in Europe.

First, in September the Fed detected at an early stage the covertly developing financial crisis. It could do this because the FRBNY is equipped with the resources which provide it with an equivalent of an observatory of systemic risk**.** The Bank has a long track record of dealing with market disturbances. It maintains direct connections with key market participants, a large department of bank supervision**,** and a financial market research centre. In the light of fast growing market disorder, of which LTCM was both a victim and a catalyst, this explains how and why the Fed could make an early diagnosis that a non-regulated hedge fund like LTCM was at the epicentre of a systemic event. Were that episode to occur in Europe, neither the ECB, nor any national central bank could have detected the potential systemic impact of an unregulated financial entity before the failure was made public. In the case that European agencies were eventually convinced of the gravity of an usual situation of that type, a lengthy and controversial debate would have taken place before any real action would be taken.

The Fed was confronted with a dual problem. The first was the direct impact of the LTCM failure on its large bank creditors since the fund was heavily leveraged. The second was the general flight to liquidity. Dealing with the first required an off-market reduction of LTCM's debt. Solving the second was a puzzling question of monetary policy. The Fed had to be flexible enough to deviate from its policy, taking into account that the macroeconomic indicators pointed to a tight labour market and a rather high output gap. Later experience in Europe demonstrated that such flexibility is not unthinkable**,** but always delayed by political compromises. In the post-LTCM period, the Bundesbank waited until December 1998 to cut interest rates. This was the last Bundesbank decision before responsibility for monetary policy was vested in the newly born

ECB.

To manage the LTCM rescue the Fed acted as a coordinator. The FRBNY coordinated a consortium of commercial banks under its own auspices. The consortium agreed to inject $3.5b on the condition that there would be an orderly reduction of LTCM's exposure**,** in the expectation that a more conventional structure of credit risk spreads would then return**.**.

To restore confidence, the Fed made three cuts in the Fed Funds rate**,** on September 29, October 15**,** and November 17 (25 basis points each). The first move was largely expected and did not change the pessimistic mood of the markets. If anything, the crisis deteriorated in early October, when it reached the foreign exchange market**,** with the Yen undergoing the largest appreciation ever in one day on October 8. By contrast**,** the mid-October cut was completely unexpected, not being made at a regular session of the FOMC. It had a dramatic impact on financial markets and instantly turned the TED spread sharply downwards. The third cut confirmed market convictions that the Fed was determined to supply whatever liquidity was needed to allow a normal functioning of financial intermediation. In response, the Stock Exchange rebounded spectacularly, recouping in only one week the full losses which were accumulated since the summer.

The remaining question is why and how the lender of last resort can be decisive in reversing widespread market uncertainty, which latter can paralyse the making of financial contracts. Why did the October 15 action turn the markets around and not the September 29? In an acute liquidity crisis what matters above all is the immediate liquidating value of securities in secondary markets. When all market participants are in doubt about what this value may be, liquidity evaporates because market participants tend to test liquidity levels. This creates a shortage of parties willing to stabilise asset markets at any expected price. A market liquidity crisis means that participants cannot find out a floor price, which could generate buy orders in the prospect that the price will go up. The lender of last resort is the only agent that can peg a floor price, either by buying directly the oversupplied securities or by backing potential market makers (big investment and commercial banks) through plenty of «cheap» liquidity in the money markets.

So a liquidity crisis is a peculiar market condition when all market participants are extremely dependent on the central bank. The lender of last resort has the capacity of correcting the climate of uncertainty in such market attitudes**.** To be effective, the LOLR function should be a rare act of sovereignty of an extraordinary nature. If the market is convinced that a benchmark has been reinstated, confusion is removed and the business of differential asset pricing can work again. Contrary to September 29, the October 15 cut was extraordinary since it was unexpected**,** and quite contrary to the normal operating procedures of the Fed**.**

c. Averting credit crises during the downturn of the financial cycle.

The financial cycle can feature episodes of distress, which are driven by asset price declines and entail significant losses in real output for the whole economy. Because the real impact of financial instability is the result of endogenous risk, as emphasised in the first part of the paper, a macro-prudential approach would improve the performance of monetary policy. This assumption is justified in cases whereby systemic risk arises out of common exposures to macroeconomic risk factors, such as the dynamic interaction of credit and asset prices. In the upturn of the market, appreciation of the mark-to-market value of wealth conceals the imbalances which build up due to rising indebtedness. The endogenous under-assessment of risk makes the financial system over-stretched. The downturn is often triggered by an unexpected catalytic event, which may be the failure of some innovative firm, the failure to finance a key merger or doubts about the liquidity of some high-yield market. The effects are particularly

dynamic: Asset prices plummet; credit risk spreads become problematic; and over-indebtedness must be corrected. The endogenous depressive spiral of debt deflation restrains the painful process of balance sheet consolidation at the individual level. In the meantime a credit crisis can transform the financial cycle into a full-fledged financial crisis.

In so far as risk is endogenous and highly pro-cyclical, there is no point in invoking market discipline. With respect to overall financial stability, financial markets are part of the problem, not of the solution. In times of euphoria shared by all market participants, a public authority which is dedicated to macroeconomic management**,** and possesses an ability to influence financial markets**,** and means to assess the balance of risks, is the only institution that could take care of the global externality. The central bank is the likely candidate. It would hopefully rely on an observatory of systemic risk and run in-depth studies on measuring the probability of global financial distress as a function of cyclical variables, examining the interaction between the momentum of credit and indices of asset price overvaluation. To assess the extent of possible losses, the central bank could elaborate macro-stress scenarios in cooperation with the largest financial institutions. This methodology would help to overcome the deficiencies of sophisticated credit risk models used internally by banks, which do not make account of endogenous interaction between risk factors expressed in reduced form by cyclical macro-variables.

With an improved framework for measuring systemic risk linked to the financial cycle, the central bank can incorporate macro-financial stability in the conduct of monetary policy. First, if a speculative build-up is detected at an early stage in the upturn of the financial cycle, the central bank may decide a pre-emptive tightening of monetary policy for the purpose of avoiding an eventual future credit crisis. If the diagnosis is too late so that the cost of tightening would be too high, an estimation of the probability of distress and the extent of likely losses would be a particularly valuable tool for the central bank. It provides the backdrop against which monetary policy may be relaxed as early as necessary**,** and an estimation of the effects of this action during the course of the downturn. Not surprisingly**,** the 2000-2002 fall of Stock prices was accompanied by a very responsive policy by the Fed and conspicuous inertia on the part of the ECB.

III.3 crisis resolution: handling bank failures.

Many reasons can explain the epidemic waves of banking crises, which appeared in almost every country which committed itself to financial liberalisation during the last thirty years. Europe did not remain immune in the period between the crisis of secondary banking in the UK in the 1970's and the current crisis of German banks, once viewed as the guardians of virtue. There are many causes of bank problems. Most problems are caused by the failure of management to respond to a more risky and more competitive environment under the pressure exerted by shareholders' concerns for steadily higher returns on equity. Managers pursued aggressive growth at low margins to absorb overcapacities: first, they entered new businesses via costly mergers and acquisitions which subsequently caused considerable organisational problems; in parallel, they became vulnerable to off-balance sheet and mark-to-market items which are very sensitive to the volatility of financial markets. A second source of problems lies in the shortcomings of risk control systems, the inertia of top management and the confusion of powers between strategic decisions and audit, which lead to undetected errors and losses concealed behind the veil of special purpose vehicles.

Knowing that the best thing to do in the long run is prevention under a comprehensive

prudential policy outlined in section 3.1, which emphasized the quality of internal risk control systems, what remains to be said is that emergency crisis management is an art which can substantially limit the social cost or magnify it, depending on whether the prudential authorities act with a sense of the public good or for the protection of vested interests.

a. What should be done and what should not be done in the resolution of banking crises.

The Basel Committee of Banking Supervision defines a weak bank as «one whose liquidity or solvency is or will be impaired unless there is a major improvement in its financial resources, risk profile, strategic business direction, risk management capabilities and/or quality of management.» [Basel Committee on Banking Supervision 2002]

Three main types of response may be envisaged for the resolution of a banking crisis:

- Forbearance, which entails the temporal relaxation of regulatory constraints imposed on banks, so as to give them time to restore their financial position.

- Balance sheet restructuring, which covers a range of methods with the common goal of consolidating failing structures without affecting the survival of the institution. This strategy may involve a number of measures, including *inter alia* the replacement of senior management, the appointment of temporary administrators to run the business as a going concern under the control of the supervisory authority, the repurchase of doubtful debts by a public resolution fund, temporary nationalisation, recapitalisation, waiver of claims by counterparts, and mergers arranged or initiated by a public authority.

- Liquidation, which is the most radical method of resolving a bankruptcy, involving the dismantling of the failed institution and the sale of the bank's assets.

In comparing the experience of Scandinavian countries with that of France, Spain and primarily Japan, one may possibly draw some lessons regarding the effectiveness of the different strategies for the resolution of a banking crisis. The main lesson is that the chosen method and the speed of reaction are crucial. They directly influence the effectiveness of the resolution of banking problems. More precisely, forbearance should only be envisaged in the case of cyclical difficulties generating macroeconomic hardships, which temporarily impinge upon the income of bank customers. Forbearance, however, is unsuitable in the event of deeper structural problems, when it has proven to be excessively costly. The longer an institution, being on the verge of insolvency, operates without taking drastic actions, the greater the potential losses that will be ultimately transmitted to the deposit insurance fund and the taxpayer. Sadly, bank supervisors may be tempted to adopt this policy in the hope that the management will eventually take the business back on the right course, particularly, if the bank is believed «too big to fail».

There were several episodes of this unwise policy in Europe in the 1990's. Banesto and the Credit Lyonnais constitute two textbook cases of forbearance based on the «too-big-to fail» syndrome. In the case of Banesto, this «syndrome» may explain why the government failed to intervene until after December 1993, eighteen months after the bank had experienced its first difficulties in complying with its capital requirement. Then the Spanish insurance deposit fund stepped in and participated in the rescue of Banesto, allowing the shareholders to recoup part of their investment. The case of Credit Lyonnais is somewhat similar. This bank, publicly owned, was perceived as a national champion which would support French industry. In the late 1980's, the management undertook pursued aggressive acquisitions both in real estate and new ventures in the US with the tacit approval of the French Treasury. When the real estate bubble burst, leaving the US banking industry in crisis, Credit Lyonnais piled up huge losses and became technically insolvent, from an accumulation of bad loans. The situation was aggravated in the early nineties by a series of supervisory errors which were probably due to a desire to protect a

national champion**.** For instance, irrecoverable loans were taken over by the «Consortium of Réalisation» which was under the control of the Credit Lyonnais itself until the European competition policy commissioner complained. Finally, the European Commission exerted pressure on the French Government to privatise the bank, after it had sold many of its most profitable assets to cover its losses**;** this severely limited its prospects for future growth**,** and made it a takeover target. Considerations of national pride slowed down the privatisation for years, with the government precluding foreign entities from acquiring a blocking minority, let alone a majority interest.

In contrast to the unfortunate management on the part of the French and Spanish governments, the resolution of the Swedish crisis was neat and fast, albeit costly. The Swedish banking system nearly collapsed under the pressure of a violent break-down of the real estate bubble**,** and the volatility of interest rates in the EMS after the German unification in 1990. Swedish banks had shown all the characteristics of mismanagement. The government**,** however**,** nationalised most of the failing institutions, wrote off the bad debts and issued public securities in order to recapitalise the banks. In the meantime, to maintain confidence, the banks were run by public servants and all the deposits were guaranteed, regardless of whether they were insured or not. After the clean-up operation and the restoration of their capital base, Scandinavian governments could launch a program of privatisation, with sale of bank assets partly through private agreements, partly through public auctions, recouping some of the fiscal cost.

The contrasting experiences in the treatment of banking crises in Europe and elsewhere may lead to conclusions relating to success stories in the resolution of crisis. Conclusions, of course**,** may be more easily suggested than actually implemented**,** because technical matters interact with political considerations. Three recommendations**,** however**,** stand out:

- The public guarantee of deposits should be explicit, widely understood and extensive, so that it is never doubted. Public confidence enhances the freedom of governments to take painful and quick decisions in restructuring bank assets, eventually liquidating some of them, without causing any panic.

- Restructuring should be run with a clear industrial vision: mergers and alliances should be adapted to the economies of scale and scope in the larger European market. Internal control systems should be overhauled to improve the intrinsic return of the new entity. This vision is what legitimises the use of public money and guides the ensuing privatisation.

- Penalising those responsible for the failure is decisive. The shareholders should lose their capital, the managers should be fired and the directors dismissed. If fraud is detected, suspects should be prosecuted.

b. The lack of a European framework to deal with weak banks.

The banking crises of the early 1990's demonstrated that final losses can be colossal(table7). The subsequent restructuring invariably involves transferring the larger portion of those losses to the central budget. Not only do banking crises result in public expenditure which must be absorbed by higher taxation (or spending cuts), but they are also costly in terms of lost economic output.

Table 7. Estimated length of crisis, gross output loss and recovery time. The Scandinavian examples.

		Recovery time in	Gross output loss **as**

Countries	Recovery time	years	percent of GDP
Finland	1991 – 1996	7	23,1
Norway	1987 – 1993	8	19,6
Sweden	1991 – 1992	3	6,50

Source : Honohan P. And Klingebiel D., World Bank (2000)

Of course the net fiscal costs involved are far less important than the losses of gross output. For instance, in Finland the final losses were around 10% of the 1993 GDP and for Sweden around 2% of the 1997 GDP.

Loss-sharing agreements at the national level can only be imposed on the divergent interests of the parties in accordance with the bankruptcy laws of that country. In the light of the insufficient progress to date towards a European level of crisis management, the obstacles to transposing the foregoing procedures to the European level are difficult to overcome. There is no European budget capable of absorbing losses from a pan-European bank failure**,** and no European law which would enable the European Court of Justice to allocate the losses among several countries. An agreement negotiated among national Treasuries would be the only conceivable procedure. The question of absorbing the final fiscal losses is not identical to the question of LOLR intervention. Even if a European lender of last resort is created, the question of resolving cross-border bank failures remains.

The importance of this question has been underestimated because of the scarcity of cross-border activities and mergers. A forward-looking view however would point to the risk of potential conflict between host and home countries in a pan-European banking crisis. Because supervision is decentralised, national regulators are primarily, if not exclusively, concerned with the consequences of a failure on their own financial markets**,** irrespective of the adverse effects elsewhere. For instance, in the case of the failure of the Bank of Credit and Commerce International (BCCI), many of the clients were not residents in Luxembourg, i.e. the country where the bank was licensed. Thus, the costs of failure were incurred by foreign clients or their insurers. Spill-over effects of that kind could be reinforced by the current insurance deposit directive which gives the opportunity to a foreign branch to join the deposit insurance scheme of the host country, in spite of the supervision remaining the responsibility of the home country.

Similar deficiencies can be observed in the case of private sector involvement in the management of banking crises. There is no political authority at the European level which can organise a consortium of banks for the purpose of supporting banks in distress. As long as the ESCB is not formally involved in preserving financial stability, a monetary authority, which could assume this task, is also lacking.

CONCLUSIONS.

This report has pursued three objectives: to point out priorities in macro-prudential management to strengthen financial safety nets; to meet the supervisory challenge raised by the merger of intermediation and market finance in the derivatives markets; to improve the institutional structure of prudential agencies in a monetary union in the light of the limits posed by the underlying principle of subsidiarity in all respects**,** except for monetary policy *stricto sensu*.

The proposed reform is pragmatic and accords with the realities of the market and the wider institutional framework. EMU was born at the end of a decade of financial turmoil, which began with a real estate crisis and closed with a Stock market crisis. Our recommendations relating to crisis management allow for the overriding importance of cumulative credit gaps in the development of financial fragility. They also emphasise the disruptive impact of endogenous risk, which risk control systems of individual banks fail to detect. Such risk is triggered by uncertainty over the availability of market liquidity in cases where stress conditions have been caused by an over-supply of credit. This analysis justifies the strong assertion that the ECB as a crisis manager should be aware of credit excesses, regardless of their possibly limited impact on the conventional measurement of inflation. Similarly, the ECB should unambiguously operate as a lender of last resort with responsibility for market liquidity throughout the European financial system.

This proposed enlarged role for the central bank cannot be efficiently implemented without substantial improvement of its ability to detect systemic risk. The development of early warning indicators of financial fragility in the system at large, and the running of macro-stress tests to detect unfolding conditions of endogenous risk in specific markets, call for the creation of a European observatory of systemic risk which would work in close cooperation with the ECB. The observatory should have permanent links with national supervisors, organized market authorities and key market makers in over-the-counter markets. These links are essential in coordinating information flows which would facilitate permanent surveillance of volatile markets. The observatory could also review general market conditions and diagnose the probability of upcoming systemic events.

Micro-prudential systems of regulation and supervision have to be improved against the backdrop of subsidiarity and wide disparities in national theories of prudential policy and design. We do not advocate at this stage a huge step forward in establishing a mega-regulator, which would assume the full powers of national supervisors. Further progress in financial integration may however give rise to challenging questions.

Recent developments have highlighted an interesting paradox: Supervisors argue that transparency constitutes a sine qua non condition of market discipline, whereas the actual source of risk becomes increasingly difficult to identify in the complex structures of risk transfer in the derivatives markets. The growth in credit derivatives, which link banks and non banking institutions, the growing number of financial options and the growth in securitisation create off-balance sheet risk exposures which are inadequately reported, if at all. As a consequence, dynamic hedging strategies by market makers in OTC markets trigger spill-over effects on bond and equity markets, particularly in turbulent financial conditions. Price fluctuations of that nature are erroneously identified by other investors as changes in fundamental values. Hence rather than being addressed**,** the exposure is magnified. Inadequate information is therefore a primary source of liquidity shortages which trigger market volatility. Moreover, the counterpart credit risk relating to financial swaps is inextricably connected with market risk, which renders quantification in Value-at Risk models increasingly difficult. In short, under those developments

the scope for endogenous risk generated by market interdependencies under stress has been greatly enhanced. In the light of market integration across the Euro area, the national separation of supervisors and differences in their terms of reference aggravate the lack of relevant information.

For those reasons we advocate the establishment of a European agency for transparency. The proposed agency would improve disclosure requirements, harmonise their implementation by national supervisors and actively encourage cooperation among supervisors, market authorities, and private associations of market makers. As far as the design of national prudential supervision is concerned, it is most likely that the increasing linkages between banks and non-banks will ultimately be a driving force towards the British model of a single financial services authority. The trend has yet to appear in some countries and reform in that respect will take time. In the meantime, harmonisation is long overdue in the aspects of prudential regulation which are most important for systemic safety. We have emphasised the need for common rules relating to public deposit insurance schemes, provisions to vary capital requirements in accord with the financial cycle, the accountability of rating agencies and the creation of new European agencies.

The institutional framework for the resolution of cross-border bank insolvencies is the weakest link of the current prudential framework. The principle of fiscal subsidiarity collides with the single currency. Bank failures invariably require recapitalisation of failed banks using public funds. At present, only national Treasuries may decide the injection of public funds in bank restructuring, because funds cannot be raised at the Community level and cooperation between national Ministries of Finance is lacking. The ECB is not involved at any stage in this process. Further, the process operates effectively only if the cross-border aspect of the crisis is small compared with the purely domestic effects. It is one of the reasons why governments of the larger countries have discouraged cross-border mergers. Coherent national banking systems allow national Treasuries cum national supervisors to deal with too-big-to fail banks. This is not the case in the event of large international banks with significant roles in smaller countries. In that case, the source of necessary recapitalisation is unclear. On that basis, the ECB has argued that the role of the European Banking Supervisory Committee should be enhanced. This argument can be upheld on the grounds that the trend towards cross-border mergers will intensify in pace**,** with deeper financial integration and the growth in universal banking. In addition, global risk transfer mechanisms between banks and non-banks will no doubt contribute to a further blurring of the boundaries separating bank intermediation and market finance.

Virulent financial cycles in integrated markets may enhance the vulnerability of EMU. National governments have been constrained by the ill-conceived Stability Pact. In the downturn of the financial cycle, the process of debt deflation impairs fiscal revenues leading to social hardship and financial distress. The central bank can and should preserve the liquidity of the financial system. But only a sovereign borrower of last resort is able to stabilise the deflationary forces which are caused by dynamic debt restructuring.

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GLOSSARY

Bank supervision : Overseeing who operates banks and how they are operated
BIS: Bank of International Settlements
Bond : A bond is a debt security that promises to make payments periodically for a specified period of time.
Collateral : Property that is pledged to the lender to guarantee payment in the event that the borrower should be unable to make debt payment.
Credit risk :the risk arising from the possibility that the borrower will default.
ECB: European Central Bank
EMU: European Monetary Union
ESCB : European System of Central Banks
FDIC : Federal Deposit Insurance Corporation
Financial conglomerates : A firm that owns and manages a number of different types of financial intermediaries
Financial derivatives: financial instruments that managers of financial institutions use to reduce risk. Forward contracts and financial futures are financial derivatives.
Forward contract : An agreement by two parties to engage in a financial transaction at a future (forward) point in time.
FSA : Financial Services Authority. It is a unified british regulator for banking, Insurance anf financial markets. It was set up (1997) by the Bank of England Act.
Hedge: to protect oneself against risk
IMF : International Monetary Fund
IRBA : Internal Rating Based Approach
IT : Information technologies
LTCM : Long Term Capital Management
Marked to market : repriced and settled in the margin account at the end of every trading day to reflect any change in the value of the futures contract
Money market : a financial market in which only short term debt instruments (maturity of less than one year) are traded
Money market mutual funds : funds that accumulate investment from a large group of people and then invest in short term securities such as treasury bills and commercial papers.
NASDAQ : National Association of Securities Dealers Automated Quotation System is a computerized network that links dealers around the US country together and provides price quotes on over-the-counter securities.
NCBs : National Central Banks
Over-The-Counter (OTC) market : A secondary market in which dealers at different locations who have an inventory of securities stand ready to buy and sell

securities to anyone who comes to them and is willing to accept their prices.
Return On Equity (ROE) : Net profit after taxes per Euro of equity capital.
Secondary market : A financial market in which securities that have previously been issued can be resold.
Securitization: The process of transforming illiquid financial assets into marketable capital market instruments
TARGET: a collateralized real time gross settlement payment system for the euro area. TARGET constitutes the technical infrastructure to support a large European money market an so to carry out the single monetary policy.
Underwriting: Guaranteeing prices on securities to corporations and then selling the securities to the public
Wholesale market : market where extremely large transactions occur, as for money market funds or foreign currency
Yield curve: A plot of the interest rates for particular types of bonds with different terms to maturity

Change to Figure 1:

Reallocation of portfolios

Reduction in leverage [remove accent over e]

Propagation between markets [remove s on propagations]

Increase in Credit risk

Increase in Market risk

Change to Footnote 5:

Di Giorgio and Di Noia propose the same kind of authority for transparency**,** but within a different proposed global institutional architecture for prudential policy.

Change to Footnote 10:

The FDIC experience shows that the insurance deposit fund can itself become insolvent**,** and may**,** therefore**,** need a fiscal bailout.

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