CENTER FOR FINANCIAL STUDIES

WHITE PAPER

NO. I

FEBRUARY 2009

New Financial Order
Recommendations by the Issing Committee

Preparing G-20 – Washington, November 15, 2008

Otmar Issing (Chairman)
Jörg Asmussen
Jan Pieter Krahnen
Klaus Regling
Jens Weidmann
William White

Center for Financial Studies
Goethe-Universität Frankfurt ■ House of Finance
Grüneburgplatz 1 ■ 60323 Frankfurt ■ Deutschland
Telefon: +49 (0)69 798-30050 ■ Fax: +49 (0)69 798-30077
http://www.ifk-cfs.de ■ E-Mail: info@ifk-cfs.de

CONTENT

1. Purpose of the paper - causes of the crisis

In line with the mandate of the committee this paper does not discuss problems of managing the present crisis. It rather deals with elements of a future financial architecture which should help to avoid a repetition of past developments. The recommendations include: Higher transparency, proper incentive structures, better regulation, efficient supervision, and improved international cooperation among authorities.

The global crisis in financial markets is the consequence of a dynamic interaction between factors in the macro and the micro side of the economy. The combination of massive liquidity and low interest rates has caused sharp increases in asset prices, especially in the housing sector of many countries. In an environment of inadequate regulation and important gaps in supervisory oversight, inappropriate incentive structures have promoted short-termism and encouraged the production of complex financial instruments, supported by high degrees of leverage. Overall, the situation in booming financial markets became more and more unsustainable. It needed only a trigger to collapse. This trigger was delivered when house prices in the US started to fall with the expectation that this would continue for an extended period of time.

2. Recommendations

2.1. Incentives

This section discusses three major cases of incentive misalignment that have greatly contributed, on the micro level, to the current financial crisis. These cases refer to structured finance, rating agencies, and management compensation. They all contributed to an understatement of true default risk, generating mispricing of credit instruments. We deal with the structuring of securitization transactions first, since it is here where the current crisis started. We then turn to the role of rating agencies, and lastly to management compensation. To the extent that our recommendations relate to better information for investors, it will be covered in the following subsection on transparency

a) Rating agencies

Rating agencies are the major information provider for bond investors in capital markets around the world. By inappropriately applying their long-established bond rating standards to the valuation of structured finance products (tranches), rating agencies have compromised their credibility. In order to re-establish trust in structured finance ratings, a number of new rules should be enforced. For this purpose, agencies should be subjected to regulatory oversight, albeit in a limited way.

- Rating performance (i.e. the long-term statistics relating initial ratings to subsequent defaults) should be monitored by the supervisors, applying high standards of transparency and statistics. Rating performance will be published regularly (e.g., once a year).
- To minimize rating shopping, unsolicited ratings are encouraged (e.g. by mandatory rating disclosure).
- Authorities should continue to review their use of structured finance ratings in the regulatory and supervisory framework und reduce the use to the extent possible in order to limit the pressure on agencies, e.g. in consumer protection regulation.
- Furthermore, rating fees may be linked to rating performance (either by linking it to default statistics, or by linking it to individual tranche performance; in the latter case, agencies essentially buy into the tranches they rate). An annual report on rating practice

and rating competition by a central oversight body may help to monitor market integrity and quality.

b) Structured finance

The pooling and tranching of loan portfolios requires special provisions to ensure that the underlying relationships between borrowers and lenders remain intact. Securitizations issued during the past few years typically did not meet these requirements. In order to realign incentives, the whereabouts of the tranches that carry most of the risk, the first loss pieces, has to be public knowledge. This will ensure that the market can once again price individual securities properly (see the corresponding paragraph under "Transparency").

c) Compensation

Management incentives have increasingly focused on short-term performance, disregarding longer-term risks. For instance, various instruments were used to frontend-load financial transactions, and by carving out income via short-term bonuses to management and employees. Since the compensation system influences management behaviour, a stronger reliance on long term performance of investment strategies is required in order to achieve an appropriate incentive alignment. New compensation models may be needed that allow striking a proper balance between long and short term orientation, involving bonus and malus components. Such schemes could resemble pension annuities rather than all-cash-out payments. Since compensation schemes should not be dictated by government decree, disclosure to investors will be a reasonable regulatory strategy (see the corresponding paragraph under "Transparency"). Of course, regulators may contribute to identifying sound practice principles for compensation schemes.

2.2. Transparency

The objective of an increase in transparency is to overcome opaqueness which has prevented investors to assess the risks of financial instruments correctly. The opaqueness, in turn, is to a large extent the consequence of misaligned incentives in many areas of the financial value chain. Thus, by specifying rules of disclosure, the market will be once again enabled to price-differentiate between financial instruments, taking incentive alignment differentials into account.

a) **Structured finance**: We propose to make it mandatory that in securitization transactions the economic first loss position is described and its allocation in the market is treated as a bond covenant, and is disclosed to the market, thereby avoiding opaqueness of bank portfolio risk. Disclosure is needed for the market to adequately price risks and thus induce banks to retain first loss pieces, and to apply sound banking practices. Since the size of the first loss piece alone does not determine the amount of risk retained, the stipulation of any mandatory retention rate has to be discussed carefully. Rating agencies and other information providers (e.g. auditors) are supposed to report regularly on compliance. The revelation of first loss pieces allocation among market participants may even be used to ease tensions on today's interbank markets.

b) **Compensation**: We propose disclosing, on a regular basis, the incentive components in management compensation schemes, and to encourage rating agencies (and other information providers, like auditors) to report a firm-level metric that captures incentive alignment. Mandatory rules on management compensation, such as salary caps or bonus limits, are not advocated, as they are expected to backfire.

c) **Risk map**: An internationally coordinated effort in creating the institutional background for drawing, on a regular basis, a global financial risk map is recommended. The map involves all major international financial institutions, e.g. banks, insurance companies, hedge funds, and all major financial products, e.g. loans, credit insurance and CDS, and ABS. The details of such a risk reporting system still need to be worked out, possibly by a task force consisting of market participants, regulators and academics.

d) **Credit register**: Either as a by-product of the risk map, or as a stand-alone initiative, we propose the creation of a global credit register. Such a register compiles major interbank and customer-specific exposure data to allow individual market participants, typically those institutions that also deliver the raw data, to learn about major exposures of their counterparties. While the value of such information is appreciated almost universally on a national level, there is nothing commensurate on an international level. However, even the best register will not be able to provide an account of total bank exposures in real time.

e) **Accounting standards** are to be reviewed.

2.3. Regulation and Supervision

The existing regulatory and supervisory system has important weaknesses and gaps (see 1.) and should be reformed to avoid the build-up of excessive leverage in the future and to reduce the system's pro-cyclicality.

a) All gaps in the supervisory system should be closed:

- Financial institutions should be supervised on a fully consolidated basis thus inhibiting the scope for regulatory arbitrage.
- Investment funds operating inside banks, insurance companies or non-financial corporates should be supervised comprehensively.
- All systemically important financial institutions should be subjected to appropriate supervision and regulation
- The "indirect" supervision of hedge funds via their regulated creditors needs to be strengthened by consolidating the information available from different lenders.
- The activities of credit rating agencies should be monitored, including through the implementation of the IOSCO´s revised code of conduct (see 2.1.).
- Market participants should urgently implement central counterparty clearing for OTC credit derivatives. Central counterparty clearing would help to monitor market developments and reduce settlement risks.
- Compliance of offshore-centers with relevant regulations could be improved through an "indirect" approach if all major financial centers cooperate.

b) Capital requirements should be tightened after the end of the current crisis:

- Introduction of an additional overall leverage ratio in addition to the risk-weighted Basel ratio.
- Additional capital requirements for SIVs, conduits and off-balance sheet activities unless they are fully consolidated.

- Additional capital requirements for lending to hedge funds and lending to non-cooperative off-shore centers.
- Allowance for liquidity risks.

In addition, capital requirements, provisioning rules and accounting rules should be reviewed to make the system less pro-cyclical.

c) **Cooperation** among the different authorities and bodies, which are directly or indirectly involved in the supervision of financial institutions, should be improved:

- Improved information flow between national supervisors to obtain a complete picture of the situation of cross-border banks, bank holding companies, hedge funds, and other investment funds.
- Creation of "global colleges of supervisors" for cross-border banks.
- Greater consistency in the regulation of different financial entities (banking, insurance, securities).
- Enhanced interaction between institutions with experience in assessing macro-prudential risks and those in charge of assessing micro-prudential risks.

2.4. International Institutions

International institutions should play a stronger role in crisis prevention. International institutions can help to build a more robust macro-economic policy framework, a key condition for preventing future crisis.

The **International Monetary Fund (IMF)**'s role as an international "watchdog" should be strengthened. This relates to macro-economic issues, like global imbalances and exchange rates, and to financial markets but the concept of "Bretton Woods II" is misleading. In particular, the IMF should re-direct its work towards a deeper and more comprehensive analysis of financial market developments in the following way:

- A stronger focus on spillovers between financial markets and the real economy.
- An assessment of macro-prudential risks.
- Financial Sector Assessment Programs (FSAPs) should become mandatory for all IMF members states.
- Analysis of comprehensive data on global financial market developments (as a pre-requisite for a global risk map, see 2.1.) in close cooperation with the BIS.

It is important to note the limits of what can be reasonably expected from the IMF:

- There is an unavoidable trade-off between the neutrality of the work of the IMF staff, based on rules, and the political interests if its shareholders.
- The IMF does not have the expertise to act as standard setter for financial markets.
- The IMF does not appear to be suitable to become a global supervisor for the largest international financial institutions.

The Bank for International Settlements (BIS), including its committees**,** is the standard setter in financial markets. It will be the key body to adopt most of the measures proposed above (under 2.3.). However, the BIS suffers from a lack of legitimacy and should broaden its membership (particularly in its committees).

The **Financial Stability Forum (FSF)** is the key forum to coordinate and advocate regulatory and supervisory reforms. But it also suffers from a lack of legitimacy as it is G7-dominated.

The FSF should continue to be anchored at the BIS but the links between the FSF and the IMF should be strengthened. A merger of the FSF with the IMF appears neither feasible nor efficient.

The membership of the FSF should evolve in line with the future enlargement of the G7/8.

The European dimension. The current financial crisis has also highlighted the weaknesses in the EU's supervisory framework, which remains fragmented along national lines. A reform of the European supervisory framework is essential to protect the Single Market and the Euro and needs to go beyond what is feasible globally. European issues will not be discussed by the G-20 but the EU should take the lead in implementing the proposals presented in this note.

3. Concluding remarks

A number of our recommendations are more or less straightforward and in line with those by the FSF, other institutions, or individual authors. On some issues more information and research is needed. This is one reason to warn against premature conclusions and even more against hasty decisions. The elements of a new and better financial architecture must interact in a positive way and support each other. This cannot be achieved by quick and unavoidably short-sighted actions. It is also important that the crisis management –increasingly with the duration and dimension of measures- takes into account the impact on the future development of financial markets. This refers not only to exit strategies for state interventions in banks etc., but also to the creation for a stable, non-inflationary environment.

Current proposals for strengthening the financial architecture are basically focused on providing better rules for private actors. This is very important, but not enough. An analysis of the underlying causes of the crisis show that it would not have gained such significant and costly dimensions without a macroeconomic environment of massive liquidity and persistently low interest rates. As a consequence, sounder macro policies and more prudent rules for individual actors have to go hand in hand.

Appendix

A 1. Causes of the Crisis

Since the end of the 1990s and thereafter, interest rates have been low and liquidity high around the world. This was due in no small part to currency pegging in key regions of the world economy.

The increasing integration of China and other emerging markets into the world economy resulted in global pressure on commodity prices. As it picked up speed, globalization limited the scope of businesses to increase prices and restrained wage growth in industrialized nations. The huge rise in liquidity therefore did not make itself felt on commodity prices for quite a while. Nor did the strategy of "inflation targeting", whilst ignoring money supply and credit volumes, encourage central banks to raise interest rates.

However, the high level of liquidity did not remain without consequences. It led to rising asset prices around the world. The combination of high liquidity and low interest rates produced a strong incentive to choose ever riskier investments. As a result the premium over secure investments became ever smaller. This trend was enhanced by numerous financial innovations.

The securitization and packaging of financial products – without the originator retaining any risk – compounded this trend. Complex products were bought world-wide, and in particular in Europe, in Germany not least by institutions with no viable business model of their own. The certificates issued by the rating agencies underpinned this behaviour.

Transparency had largely been lost. It had barely ever existed at global level, and at some stage the players themselves retained only a rudimentary overview of their own transactions. A lack of regulation was revealed, especially in the USA, where politically leveraged institutions (Freddie Mac and Fannie Mae) amplified the real estate boom yet further. In numerous countries the banks circumvented capital regulations by establishing new entities for their activities. The failure of the oversight regime cannot be excused by the fact that these activities were entirely legal.

This development occurred against a backdrop of financial incentives which rewarded short-term success – in particular the sale of new financial products – with no reference to the long term. Risk management shortcomings within financial institutions have now also been revealed.

While maintaining liquidity and protecting depositors are central mantras of banking regulation, the problem of "market liquidity" has been largely neglected. It was blithely assumed that it would always be possible to refinance short-term debt via the markets at any time.

These factors combined to produce a situation in which only a slight prod was needed to shake the entire (inverse) pyramid, and indeed to bring it toppling down. This prod was delivered by the subprime crisis in the USA, the impact of which first shook the German banking world for the reasons familiar to us all and continued to spread. In the aftermath, these ripples produced by the real estate crisis spread to the countries that were more or less predestined for it because their housing markets had been overheated for years.

It would however be too simplistic and indeed misleading to blame the crisis entirely on the subprime troubles and the real estate markets. As important as this factor is – and as important as an end to the housing-market crisis in the US is for worldwide recovery – the subprime disaster was only the trigger that sparked off a worldwide financial crisis. Risks were re-evaluated everywhere – the spreads, risk premiums rose abruptly, and the high volatility of the evaluations contributed to further insecurity. Access to short-term refinancing on the markets was abruptly cut off. This caused an undreamt of liquidity crisis. With the collapse of their assets, the banks' capital ratio was put under immense pressure, and the first institutions had to be taken over or "rescued". The sense of insecurity reached a peak with the collapse of Lehman Brothers.

Since that time, the authorities in many countries have taken ever more aggressive steps to stabilize the financial situation. Liquidity infusions have been increased, government guarantees have been offered for various forms of private debt, and public sector funds have been offered to support the recapitalization of banks. While we are still a very long way from restoring trust in the markets and between stakeholders, these efforts do seem to have improved the financial situation somewhat. There have been some signs of a growing willingness for banks to lend to each other for periods longer than just a few days. Not surprisingly, however, these unusual initiatives have also raised concerns about "moral hazard" looking forward.

Nor can it be judged that the worst of the crisis is behind us. While the financial situation might temporarily appear better, the deterioration in the real side of the global economy is becoming increasingly evident. Household consumption has weakened sharply, particularly in countries where saving rates fell markedly under the influence of easy credit conditions. This tendency to retrenchment seems likely to be exacerbated both by falling asset prices and tightening credit conditions. Investment spending might also fall against such a background. Evidently, as the economy slows, both household and corporate bankruptcies will rise. This implies further losses to financial institutions and potentially still tighter credit conditions, with further impacts on both the real economy and asset prices. In sum, the joint process of deleveraging in both the real and financial sectors might still have a significant way to run.

The seriousness of the current situation evidently raises first the challenge of further policy actions to help manage the crisis. At the same time, these circumstances also present us with a political window of opportunity for reforms designed to help minimize the severity of future crises. This opportunity should not be missed, even if a repetition of recent events might be thought unlikely for some time to come. This fact, that we do have time means that suggested reforms can be well researched and carefully thought out in advance. Impetuous action, particularly if motivated by the desire to punish those held to blame for our current troubles, could easily prove counterproductive. Well considered and credible reforms, valuable in themselves, could also play a significant role in offsetting the moral hazard associated with the measures currently needed for crisis management. In this fundamental sense, crisis management and crisis prevention should not be seen as substitutes but complements.

A 2. Improving the Framework

A 2.1 Incentives

In this section we discuss several incentive misalignments that are typical for the industry. They all work in the same direction, namely they underestimate the true probability of default on the debt instruments being offered for sale. We start with the structuring of transactions, then turn to the role of rating agencies, and lastly to management compensation.

The 2007 credit crisis evolved initially around the subprime mortgage market in the US, which entailed lending programs, often government sponsored, targeting low wealth individuals. Since personal income of debtors tended to be low as well, lending in these markets was typically based on asset value alone. Mortgage Backed Securities (MBS) offered an easy ways to access capital market funding, despite the low incomes of those taking out mortgages. Government sponsored programs (Fannie Mae and Freddie Mac) played an important role in market development, both in terms of increasing market volume, and in terms of pushing debtor quality to lower levels. Using mortgage lending to enhance home ownership among lower income strata was an explicit objective of US Congress, and government sponsored programs were eager to comply.

Securitization of mortgage loan portfolios, and more generally of all types of consumer and commercial lending, is in general a useful way to mobilize funding for retail and commercial credit, and as such a viable alternative to bank deposits. Furthermore, properly designed securitization programs can address successfully the destruction of lender incentives that might be expected to go along with outright loan sales. Careful borrower selection, continuous loan monitoring, timely restructuring and intervention in default situations – all these elements of prudent and efficient banking can be upheld in securitization transactions. However, incentive alignment requires securitization transactions to obey specific technical rules of structuring, which in essence put a cap on the amount of risk that can be shed on the market. This rule, however, was not respected in securitization markets in recent years. This led to the over-pricing of low quality MBS at issue. Similar quality problems have begun to surface in other markets as well (e.g. credit card and car loans, and cov-lite corporate loans) with the full impact likely still yet to be seen.

Why did investors not respond rationally by increasing the required risk premium, thereby demanding an adequate compensation for the increase in risk? One reason is, in addition to the increasing appetite for risk prevailing across virtually all markets at the time, was the lack of information on the true risk properties of the underlying loan portfolios, in particular on the whereabouts of the first loss position. One has to recall that up until the early years of the century, perhaps until 2004, the standard securitization practice entailed retaining the first loss position. When, where, and to what extent retention standards in the industry were changing, is still largely unknown. But it is consensus opinion that these standards have been weakened over time, and that investors were ignorant of these changes for a long time. When investors began to focus on the possibility of such changes, probably in mid-2007, it became evident that the prices of structured instruments could no longer be based on originally assigned ratings. Combined with the more general retreat from imprudent risk taking, this contributed to the virtual shut-down of markets for structured products.

This raises the issue of the role of rating agencies (RAs) in these markets. In short, RAs have played the role of trusted gatekeepers. ABS market development would not have been possible without RAs providing quality assurance about inherently complex financial products to unsophisticated investors. Most observers believed that RAs were technically well equipped to perform this task, and in particular that the RAs reputational capital would serve as a strong line of defence against any compromising of rating standards. We have learned otherwise.

First, the self-disciplining role of reputation cannot always be relied upon, even under normal market conditions. This is particularly true for high quality bonds and notes, mainly because the implied default probabilities are so small. It would need very long periods to verify statistically that rating standards have been compromised, and it therefore remains unclear how agencies that cheated would be punished by the market.

Second, ratings could be gamed, i.e. clients may have been able to outsmart the rating standards. Consider ratings assigned to structured products, like MBA tranches. They are based on estimating the loss distribution of the underlying loan portfolio. These estimations rely on models that are not fully transparent to the industry. However, RAs provided "customer end" tools to their clients which allowed banks to run pre-tests of their new securitization portfolios before submitting to the RA. As a result, loan portfolios could be designed in a way that just met the criteria included in the relevant model, but may have additional risk pertaining to criteria not included in the model. As an example, consider information on whether first loss tranches are retained or not. Although we know that the sale of the so-called first loss piece lowers expected portfolio returns, this is not an explicit part of the rating model currently in use, and is therefore not reflected in the assigned rating. Hence the issuer can raise its profits by selling first loss pieces, without disclosing it to the investors. Note that the gaming argument refers to Structured Finance (SF) products only, not to corporate bonds in general. The reason is that in SF, the tailoring of portfolio composition is feasible (easy, low cost), while it is infeasible (difficult, expensive) if the underlying asset pool is an entire corporation with its fixed assets.

Third, rating shopping by issuers also contributed to a gradual erosion of rating standards among structured finance products. The negative effect follows from the right of issuers to suppress ratings which it deems to be unwelcome (unsolicited), thereby exerting pressure on the agencies.

Incentive misalignment in the industry is not confined to inappropriate securitization techniques and incentive conflicts at rating agencies. It also entails compensation systems, both for top management and for employees and line management, particularly in trading and sales. The problem is an incentive structure which induces a focus on short-term profitability, and a neglect of longer-term risks. Examples are bonus payments due at, or shortly after, selling a mortgage loan, or fees for issuing structured finance securities. Alternative compensation systems that lead to a full appreciation of risk and return will stretch the payoff at least partially over the life of the underlying business, thereby making it performance-dependent. The general idea is to add a malus component to the compensation scheme.

Here is a list of concrete measures suggested by the above arguments.

1. First loss pieces

   The issuer should be obliged (by law) to inform the market of any change in the size or composition of his stake in the first loss piece. This should encourage him to make a binding commitment to retain the first loss piece. On the other hand, if the issuer wants to sell the first loss poition, then the market can respond immediately, thereby allowing price differentiation of issues with and without recourse.

2. Ratings.

   Regulatory oversight addresses incentives problems in four areas. First, rating performance (i.e. the long-term statistics relating initial ratings to subsequent defaults) should be monitored by the regulators, applying high statistical standards. Rating performance relative to outcomes should be published regularly (e.g., once a year). Second, to minimize rating shopping, unsolicited ratings should be encouraged (e.g. by mandatory rating disclosure). Third, the use of structured finance ratings in public regulation has to be reconsidered (and dropped if necessary) in order to limit the pressure on agencies, e.g. in Basel II regulation, or in consumer protection regulation. Fourth, agencies should be encouraged to adjust their rating methodology to innovations in the financial industry, e.g. to flag structured finance ratings, to reveal incentive alignment and first loss piece retention as part of the rating information. Furthermore, rating fees should be linked to rating performance (either by linking it to default statistics, or by linking it to individual tranche performance. In the latter case, agencies might be obliged to buy into the tranches they rate (in effect to put their money where their mouth is). An annual report on rating practice and rating competition by a central oversight body might help both to monitor market quality and to draw attention to outstanding analytical uncertainties of which investors might be unaware.

3. Compensation

Since the compensation system influences management behaviour, a stronger reliance on long term performance of investment strategies is required in order to achieve incentive alignment. New compensation models maybe needed that allow striking a proper balance between long and short term orientation, e.g. bonus and malus systems, comparable to pension annuities. We propose that the incentive components in management compensation be disclosed on a regular basis. As well rating agencies (and other information providers, like auditors) should be encouraged to report a firm-level metric that captures incentive alignment in management compensation.

A 2.2 Transparency

The issue of transparency is closely related to the idea of incentive alignment. Through the disclosure of appropriate information market participants are assisted to make correct inferences on, for example, project risk and return, and market pricing and liquidity. Increased transparency is therefore a key requirement for improving market functionality. This being said, one has to keep in mind that there are certain institutions, like rating agencies, where some degree of secrecy is required for them to perform their task properly. This is why transparency of rating processes, as distinct from rating performance, is not recommended, in order to avoid a gaming of the system.

Turning to the inter-bank liquidity crisis that started in the fall of 2007, we see opaqueness of true risk exposures after several years of deteriorating credit standards as the major reason for the near-universal lack of trust among banks. It seems that on the level of bank assets, even experts in banks and rating agencies were no longer able to properly assess the characteristics (e.g. the moments) of the underlying credit risk. One reason for the unprecedented degree of opaqueness was once again the rising importance of structured finance. These financial instruments had loss rate distributions that could not be properly assessed without additional information which was not in fact readily available in the market. In particular, one important missing piece of information related to how the incentive alignment between originator and ultimate borrower had changed dramatically as lending standards worsened after 2005. This is an example of a market where an increased degree of disclosure seems likely to improve market quality greatly.

Turning to the market level, the devastating impact that a relatively small segment of the credit market, the subprime housing market, had on financial stability in the US and in Europe is notable. We see one reason for the crisis escalation in a high degree of interconnectedness between financial institutions that had escaped financial stability oversight. While we are doubtful that there will ever be powerful early warning systems in financial markets, an improved world-wide risk oversight might help to guide central bank and bank supervision activities in the future. We therefore envisage the development of a financial risk map, which would be regularly updated, summarizing both the exposures of major international financial institutions and anomalous market developments that might presage future disruptions. Such a risk map would also compile information on the shadow banking system, i.e. on SIVs, hedge funds, CDS in order to note early on any tectonic changes in the allocation of risk among financial institutions – something that was missing this time around

It has to be stressed that the methodology for constructing such a financial risk map still needs to be developed. Furthermore, for regularly updating the information in the risk map, an institution with adequately qualified staff has to be assigned, possibly the IMF or the BIS. A closely related task, which can be embedded in the concept of a financial risk map, is the creation of an international credit registrar. Such institutions exist in all major countries, but they do not yet aggregate information on cross-border transactions. We now know that cross-border financial links are abundant, and need to be considered when evaluating the solvency of any financial institution. The credit registrar in Germany is called "*Evidenzzentrale*", and it is currently managed by the Bundesbank. Although, of course, no real time register can be expected, a regularly matrix of liabilities between banks and major corporates may help to maintain transparency in international corporate financing, including interbank lending.

Here is a list of concrete measures suggested by the above arguments.

1. We propose to make it mandatory that in securitization transactions the economic first loss position is described and its potential allocation in the market is treated as a bond covenant. It would therefore be disclosed to the market. Retention by the originator need not and should not be mandatory, only disclosure is needed for the market to sort it out, thereby avoiding opaqueness of bank portfolio risk. Rating agencies and other information providers (e.g. auditors) are supposed to report regularly on compliance. Note that the allocation of first loss pieces among market participants has remained a secret to date.

2. Furthermore, and reiterating section A 2.1, we propose to disclose on a regular basis the incentive components in management compensation, and to encourage rating agencies (and other information providers, like auditors) to report a firm-level metric that captures incentive alignment in management compensation. Once again, mandatory rules on management compensation, such as salary caps or bonus limits, are expected to backfire. Rather than micro-managing compensation systems, which is likely to produce distortions in the economy, an improved approach to financial regulation needs to overcome opaqueness on corporate incentive structures, allowing the market to price-differentiate according to incentive alignment.

3. We suggest an internationally coordinated effort to draw up a global financial risk map that could be updated on a regular basis. The map would attempt to identify building stresses at all major cross-border financial institutions and in all major markets (including derivatives and markets for credit risk transfer). The details of such a risk reporting system would take time to work out, possibly by a task force consisting of market participants, regulators and academics.

4. Either as a by-product of the risk map, or as a stand-alone initiative, the creation of a global credit register might be considered. Such a register would compile major interbank and customer-specific exposure data to allow individual market participants, typically those institutions that also deliver the raw data, to learn about major exposures of their counterparties. While the value of such information is appreciated almost universally on a national level, there is nothing commensurate on an international level. Evidently, even the best register will not be able to provide a survey about bank exposures in real time. However, such a register would still capture the longer term trends that history shows have often posted the biggest threat to financial stability.

A 2.3 Regulation and Supervision

The crisis has shown that the existing regulatory and supervisory system has important weaknesses and gaps (see 1.). In particular, supervisors should think more systematically and understand the necessity to moderate the inherent pro-cyclicality of financial markets. The objective must be to avoid the build-up of excessive leverage and to reduce the system's pro-cyclicality.

Consequently,

- Gaps in the supervisory system should be closed,

- Capital requirements should be tightened and
- The cooperation of different authorities involved in supervision should be improved.

a) Gaps in the supervisory system have been identified in the following areas:

- off-balance sheet activities of banks
- investments funds (including hedge funds and funds that operate inside broader financial institutions, e.g. insurance companies)
- credit rating agencies
- derivatives
- offshore centers

The objective must be to have a supervisory system without any gaps (see 2.1.). However, the necessary measures will differ depending on the nature of the activities. The following measures should be considered:

- Regulators should supervise financial institutions on a fully consolidated basis (as foreseen in Basel II to a large extent) to avoid the emergence of unsupervised risk exposure outside the balance sheets. This should help to reduce regulatory arbitrage.
- Investment funds operating inside banks, insurance companies or non-financial corporates should be supervised comprehensively.
- The "indirect" supervision of hedge funds via their regulated creditors needs to be strengthened by consolidating the information available from different lenders.
- The activities of credit rating agencies should be monitored, including through the implementation of a code of conduct (see 2.1.).
- The creation of a centralised trading platform for derivatives would help to monitor market developments and reduce settlement risks.
- Compliance of offshore-centers with relevant regulations could be improved through an "indirect" approach if all major financial centers were to cooperate (comparison with FATF) in their oversight..

b) Capital requirements under Basel 1 have not been sufficient to avoid the build-up of excessive leverage, and this does not seem likely to improve (indeed it may worsen) under Basel 2.. A tightening along the following lines should be considered after the end of the current crisis:

- Introduction of an additional overall leverage ratio of, perhaps, 20 (as suggested by the Swiss authorities) in addition to the proposed risk-weighted ratios under Basel 2.
- Additional capital requirements for SIVs, conduits and off-balance sheet activities unless they are fully consolidated.
- Additional capital requirements for lending to hedge funds and lending to non-cooperative off-shore centers.
- Allowance for liquidity risks

In addition, capital requirements and provisioning rules should be reviewed to make the system less pro-cyclical. This could be done by activating one of the following steps during periods of high economic growth (like in 2004-07) or high credit growth:

  - Reduction of the overall leverage ratio.

- Grossing up (under pillar 2) of the capital requirements given by pillar 1.
- Increase in premiums for deposit insurance.

The activation of such steps would likely benefit from being "automatic", according to a pre-defined rule. The effect of accounting rules (fair-value accounting) on capital requirements should also be reviewed to establish whether compensating supervisory requirements might be needed.

c) **Cooperation** among the different authorities and bodies, which are directly or indirectly involved in the supervision of financial institutions, should be improved. The following possibilities should be considered:

- The information flow between national supervisors must be improved. This is essential to obtain a complete picture of the situation of cross-border banks, bank holding companies, hedge funds, and other investment funds.
- The creation of "global colleges of supervisors" for cross-border banks (along the lines of the colleges now created in the EU); this would facilitate the necessary information flow at all times but also the prospects of quick regulatory action (including the use of public funds, if necessary) during difficult times.
- Greater consistency in the regulation of different financial entities (banking, insurance, securities) when conducting similar businesses..
- Enhanced interaction between institutions with experience in assessing macro-prudential risks (central banks, International Financial Institutions) and bodies in charge of assessing micro-prudential risks (national regulators). An effective early warning system would need to rely on the expertise of both groups of institutions.

A 2.4 International Institutions

As financial markets become more global in nature, international institutions should play a stronger role in crisis prevention. However, we believe that the term "Bretton Woods II" could be easily misunderstood in this context. The current crisis was not caused by the prevailing "floating" exchange rate system. Rather, underlying trends to procyclicality were enhanced by the efforts of countries with large trade surpluses to resist appreciation of their exchange rates. Accordingly, stronger surveillance over macro-economic policies, exchange rate policies and global imbalances are desirable.

A stronger role for international institutions is important because a large number of individual countries cannot coordinate complex financial market issues in an inter-governmental way. However, international standard-setting fora and informal bodies should broaden their membership to strengthen their legitimacy. One of the key questions in this context is how to make the Financial Stability Forum (FSF) more legitimate and more effective.

Crisis prevention in the future will also require a more robust macro-economic policy framework. For many years, monetary and fiscal policies were over-expansionary in many countries and thus contributed to bubbles and the current crisis. The IMF, OECD and the European Commission should improve their assessment of fiscal policies. Current instruments to calculate cyclically adjusted budget balances are insufficient, for example. Central banks that focused too narrowly on inflation targeting and neglected the rapid growth of of monetary and credit aggregates may have missed early signs of the emergence of bubbles in financial assets and housing. Policy loosening in downturns has often been faster than policy tightening in upswings.

The **International Monetary Fund (IMF)** is the leading international institution with a global membership that supervises the international financial system. The IMF's role as an international "watchdog" should be strengthened. This relates to macro-economic issues, like global imbalances and exchange rates, and to financial markets. To this end, the IMF should re-direct its work towards a deeper and more comprehensive analysis of financial market developments in the following way:

- A stronger focus on spillovers between financial markets and the real economy in its country reports and the semi-annual World Economic Outlook.
- An assessment of macro-prudential risks in its country reports and the semi-annual Global Financial Stability Reports.
- Financial Sector Assessment Programs (FSAPs) should become mandatory for all IMF members states and be conducted on a regular basis.
- Comprehensive data on global financial market developments (as a pre-requisite for a global risk map, see 2.1.) should be collected by the BIS and analysed by the IMF. Closer cooperation between IMF and BIS should be encouraged in this respect.

With a deeper and more comprehensive knowledge of financial market developments and risks (in addition to the Fund's traditional strength on macro-economics), the IMF could become a better "early-warner".

However, there are limits to what can be reasonably expected from the IMF:

- The more competences and political power the IMF obtains, the greater the interest in political control over its work will be. There is an unavoidable trade-off between the neutrality of the work of the IMF staff, based on rules, and the political interests of its shareholders.
- The IMF does not have the expertise to act as standard setter for financial markets. This task has been carried out successfully by committees of national experts meeting at the BIS (see below) and elsewhere. Double-work should be avoided.
- The IMF does not appear to be suitable to become a global supervisor for the largest international banks since that would interfere with national sovereignty, including the right of Parliaments to approve budgetary expenditures in case of solvency problems (more suitable solution: colleges of supervisors, see above).

Finally, a stronger role for the IMF requires that the voting structure (quotas) of its members is kept under permanent review. The growing weight of emerging economies will require further reductions in the weight of advanced economies in the IMF.

The **Bank for International Settlements (BIS)** has a clear mandate for global financial stability, has more expertise in regulatory and supervisory issues than any other international institution, was more successful than others in warning early about the current crisis and collects a huge amount of financial market data. These strengths of the BIS should be preserved and used effectively.

- Most of the measures proposed above (under 2.3.) would have to be discussed and agreed in the framework of the BIS or one of its committees.
- However, the BIS suffers from a lack of legitimacy because its core decision-making bodies and committees are dominated by G-10 countries. For example, Japan is the only Asian country in the key "Basel Committee on Banking Supervision"; China and Mexico are the only representatives from emerging markets on the BIS Board that comprises 20 members.

The **Financial Stability Forum (FSF),** created in 1999 to bring together Finance Ministries, Central Banks and Supervisors from G7 countries, has become the key body to coordinate and advocate regulatory and supervisory reforms. It has worked well for the G7 but also suffers from a lack of legitimacy globally as only a very small number of non-G7 financial market centers attend as observers. No large emerging economy is represented in the FSF.

A key question will be how to use the expertise of the FSF effectively at the global level. We believe that the FSF should continue to be anchored at the BIS (where currently the Secretariat of the FSF is located) but that the links between the FSF and the IMF should be strengthened. A merger of the FSF with the IMF appears neither feasible nor efficient.

However, ways to strengthen the legitimacy of the FSF, without loosing its effectiveness, need to be considered.

The membership of the FSF could evolve in line with the future composition of the G7/8. The G7 has played the principal steering role for the global financial system for three decades. This is changing and the meeting of the G20 in Washington on 15 November 2008 is a clear indication of that. If the G7/8 were enlarged by the largest emerging economies, such as China, India and Brasil, this should have automatic consequences at the "working level", such as the FSF, but also the Basel Committee on Banking Regulation.

The European dimension. The current financial crisis has also highlighted the weaknesses in the EU's supervisory framework, which remains fragmented along national lines despite the substantial progress achieved in financial market integration over the last decade and the increased importance of cross-border entities. A reform of the European supervisory framework is essential to create a truly integrated financial market in the EU and to protect the Single Market and the Euro.

Although these issues are unlikely to be discussed by the G-20 on 15 November, the European experience can be useful in revealing the problems and pitfalls in creating a more efficient, less crisis-prone regulatory system. For example, while it appears essential, over time, to establish a Single Regulator for the largest cross-border banks in the EU, this seems to be impossible at the global level because of potential budgetary implications and unresolved accountability issues. The EU has a 50-year history of transferring sovereignty to the European level if necessary for the good functioning of the Single Market. This will make it much easier (not easy) for the EU to make progress in all the areas mentioned above (2.1 to 2.3) related to transparency, incentives, regulation and supervision. The EU should therefore take the lead in implementing these proposals.

A 3. Concluding remarks

A number of our recommendations are more or less straightforward and in line with those by the FSF, other institutions, or individual authors. On some issues more information and research is needed. This is one reason to warn against premature conclusions and even more against hasty decisions. The elements of a new and better financial architecture must interact in a positive way and support each other. This cannot be achieved by quick and unavoidably short-sighted actions. It is also important that the crisis management –increasingly with the duration and dimension of measures- takes into account the impact on the future development of financial markets. This refers not only to exit strategies for state interventions in banks etc., but also to the creation for a stable, non-inflationary environment.

Proposals for strengthening the financial architecture are basically focused on providing better rules for private actors. This is very important, but not enough. As the analysis of the underlying causes shows, the crisis would not have gained such a dimension without a macroeconomic environment of massive liquidity and persistent low interest rates. As a consequence sound macro policies and prudent rules for individual actors have to go hand in hand.