INSURANCE COMPANIES AND THE FINANCIAL CRISIS

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Suggested questions for discussion are included in a box on page 2.

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SUGGESTED QUESTIONS FOR DISCUSSION

In the view of delegates, how significant have developments in financial markets, including those in equity and corporate bond markets been for the various types of entities in the insurance sector, such as life insurers, non-life insurers, reinsurers, monoline insurers etc.? How have delegates’ views about the financial health and risk exposure of these different insurance sectors evolved since the last meeting? Even if the exposure in the insurance sector in the aggregate may be limited overall, how serious is the issue of concentrated exposures in supervised entities and what exposures raise most concerns?

What is known in terms of quantitative estimates about the role that the choice of asset accounting categories (held-to-maturity versus trading books) plays in explaining observed differences in the mark-to-market credit losses reported by the banking sector one the one hand and the various insurance sectors on the other? How significant is the risk that insurers may be holding future losses in held-to-maturity accounts?

What policy actions, if any, have been developed or considered to address possible deterioration of insurance sector health in the aftermath of the financial crisis? On a specific issue, what are the policy/regulatory lessons regarding financial guarantors that are emerging from recent developments? In this context, one important question is how to ensure that they recapitalise and that there continues to be closer alignment between the growth of the financial capacity of these entities to pay claims and that of their risk exposures. What is the outlook in this respect and what, if any, is the role for policy?

What are the main lessons that have been drawn from the experiences related to AIG regarding the transparency of risk exposures in large financial groups? What is the outlook for the business model of a large financial group, whereby insurance and commercial and/or investment banking activities are combined under the same roof? What is known about the risk and revenue diversification benefits associated with this model and how, if at all, do past lessons in this regard would have to be modified as a result of most recent experiences? What should be the regulatory and supervisory arrangements for such groups and how should these arrangements be adapted in the case of financial groups with entities across different jurisdictions?
INSURANCE COMPANIES AND THE FINANCIAL CRISIS

I Overview

The significant deterioration in global financial markets and the real outlook is starting to have a more visible adverse effect on the insurance industry. While the solvency of the sector as a whole does not appear to be threatened, a number of concentrated exposures to credit risk have been revealed, including on the part of financial guarantee insurance companies, US mortgage insurance companies, and at least one large financial group. In the latter case, the losses from the holding company’s financial-products unit were quite large, while the benefits to be had from supposedly diversified revenue sources at the group level turned out to be lower than had been expected.

This particular case is but another in a growing list of examples where the benefits to be had from revenue or risk diversification have been called into question. Once the crisis abates, the Committee may want to look more closely at structural issues such as the outlook for the financial group model, in which insurance and banking service providers are combined under one roof. These combinations have often been defended on the grounds of the scope economies associated with the more diversified revenue stream of the group as a whole. But the weight of the empirical evidence suggests that, in crisis situations, asset prices and returns turn out to be more closely correlated than during normal times and, as it turns out, more so than has been expected and built into risk management models. As a consequence, returns of the group tend to disappoint as well.

The present note provides some background for the discussions to be held by the Committee in the context of its insurance market monitoring. The note updates parts of an earlier discussion on insurance companies and the financial crisis provided in DAF/AS/WD(2008)4 and DAF/AS/WD(2008)4/ADD1. The note singles out for special attention selected developments in insurance sectors in its second section and selected issues in this context in its third section. The fourth section provides some concluding remarks.

II Selected insurance sector developments

US mortgage insurance companies

Looking at the problems at the epicentre of the crisis, the mortgage sector, one finds US mortgage insurance companies having the most direct exposure of any insurance sector to mortgage credit risk and consequently being the institutions hardest hit. This outcome is not so surprising given that their core business consists of guaranteeing to other financial service companies that either individual loans or a portfolio of mortgages will retain their value. Moreover, they insure relatively high-risk (e.g. where the loan-to-value ratios exceed a specific percentage, such as 80 per cent) or otherwise non-standard loans (e.g. the absolute amount of the loan exceeds specific limits).

As a result of recent mortgage market developments, there have been sizable losses on the part of several of these entities, which have depleted substantial amounts of the capital buffers that many of them had been able to build up beforehand. For example, the three largest independent US mortgage insurers (MGIC Investment, PMI Group, and Radian) posted a combined USD 4 billion loss for the full year 2007. One rating agency recently predicted a return to profitability to be an unlikely event before 2010.

Share prices have fallen significantly both for independent mortgage insurance companies and for those insurance companies that have significant mortgage insurance subsidiaries (Figure 1). Prices for protection against default of these companies have risen significantly. In reaction, mortgage insurance
companies have implemented several rounds of underwriting changes that will result in more conservative credit portfolios. But the legacy portfolios remain large and their performance will only stabilise, as US housing markets stabilise and foreclosure rates fall.²

Figure 1: Equity market performance and credit protection costs for selected mortgage insurance companies

Financial guarantee insurance companies

Financial guarantee insurance companies also have been hard hit by the crisis. They tend generally to be highly leveraged institutions, which means that during times of stressed market liquidity they are forced to deleverage, thereby adding to dislocations in credit markets and exacerbating systemic risks. In this particular crisis episode, financial guarantors have come under increasing rating and market pricing pressure as losses mounted on mortgage-related structured securities for which they had provided credit enhancements.

Ratings of these companies were lowered, while their equity prices fell and premiums for insurance against credit default by these entities rose (Figure 2). The difficulties experienced by these companies fed back on to the value of the enhancements they provided, with negative effects on structured finance products, municipal bond markets, and for banks and other entities and markets that rely on insurance provided by financial guarantors.

In the United States, where responsibility for insurance regulation resides with the states, the New York state insurance regulator has been working with counterparties of financial guarantors on plans to
close out some of the contracts written and recapitalize and, perhaps, restructure some of these entities. The regulator has also committed to a review of its regulatory approach to the financial guaranty business. One of the crucial questions to be addressed in this context is the extent to which and the modalities of the same capital base being used for two types of different business activities. The likely revisions to existing regulation are intended to enhance New York State Insurance controls over bond insurers and, among other things, limit these entities’ ability to guarantee certain complex structured products, raise their required capital and reserves, and tighten their risk limits. Strengthening the financial guarantors’ capital and other regulatory arrangements is aimed at ensuring that regulations are appropriate from a prudential point of view and are sufficient to avoid market dislocations.

Figure 2: Credit default swap premiums for major US bond insurers

![Credit default swap premiums for major US bond insurers](figure2.jpg)

**Source:** Thomson Datastream

**Large financial groups**

American International Group (AIG) was special among multiline insurance companies in that the large company was a major seller of credit protection (including in the form of credit default swaps on collateralised debt obligations such as residential mortgage-backed securities) through its Financial Products unit. Unfortunately, its risk management arrangements appeared to have been inadequate for this line of business. The risk management models initially used for this purpose did not measure the risk of future collateral calls or write-downs and more sophisticated risk management models were reportedly not effectively applied until after 2006, by which time the company had already built up most of its exposure to derivatives. In 2008, the company’s Financial Product unit reported a spectacular loss of around USD 10 billion for the full year 2007 and, later, an even higher loss for the first half year of 2008. Financial market indicators of the company’s health deteriorated (Figure 3) and, in mid-September 2008, AIG’s credit rating was downgraded.

As a result, the company was required to post a substantial amount of collateral to its counterparties. But given the adverse market environment the company had difficulties in liquidating significant amounts of assets quickly enough. Thus, shortly after the company’s downgrade, the US government felt obliged on systemic grounds to provide a support package for AIG, agreeing to initially lend USD 85 billion in exchange for an equity stake of close to 80 per cent. Subsequently, on Wednesday, 8 October 2008 the Federal Reserve announced that it would lend AIG an additional $37.8 billion. On Monday, 10 November 2008, the Federal Reserve Board and the U.S. Treasury announced the restructuring of the government's
financial support to AIG. The U.S. Treasury announced that it would purchase $40 billion of newly issued AIG preferred shares under the Troubled Asset Relief Program, so as to allow the Federal Reserve to reduce from $85 billion to $60 billion the total amount available under the credit facility established earlier. As well, the interest rate on the facility will be reduced. Furthermore, it was announced that the Federal Reserve Board had authorized the New York Fed to establish two new lending facilities relating to AIG.

Given the volume of business written, especially in the area of credit derivatives, AIG appears to have become an important counterparty to systemically important banks, which has had the effect of making the company itself systemically important. Effectively, the capital injections and other liquidity-provision measures implied that this component of the financial safety net, which traditionally has had commercial banks as its prime focus, was extended to cover a wider set of financial institutions. In this context, currently, the US administration is considering plans to take stakes in nonbank financial companies separately or as part of the $700 billion rescue package enacted earlier in October.

![Figure 3: Financial market indicators for AIG](image)

The financial guarantee companies and AIG got into serious difficulties after expanding into the business of insuring credit risks through derivatives, which is an activity that traditionally was mostly associated with investment banks, although the situation in that respect has been changing for some time now. In any case, judged by results published so far, the European re-insurer, Swiss Re, seemed to have been the only other major insurance company to have built up exposure in such a risky niche business area. By and large only those insurers that own banks or specialised credit insurance units have revealed substantial exposures to the “toxic” end of the credit spectrum.

This latter observation again calls into question the benefits derived from combining insurance and commercial and/or investment banking or related activities under one roof. Actually, the financial crisis is forcing bankers and insurers to rethink the way they do business together. In the Fall 2008, several European bancassurance groups have either been broken up, rescued by governments or restructured, or been forced to raise new capital from shareholders. One large German financial group dominated by an insurer is in the process of unwinding its bancassurance relationship by selling its banking subsidiary to another bank.
The term bancassurance is typically used to characterise either one of two basic models. In one, which has been popular in the 1990s, banking and insurance business are combined under one roof by banks buying insurers or insurers buying banks. In the other, which in a way is a less ambitious interpretation of the bancassurance model, institutions form partnerships and joint ventures in which one entity’s network is used to sell another entity’s products; in most cases, insurance products are sold and distributed through a banks’s network. In the latter case, one entity may also acquire equity stakes in the other.

Earlier work by the IPPC and the Committee on Financial Markets indicates that some diversification benefits from combining banking and insurance activities in a single financial group exist, but may fall short of expectations exactly when they are needed most. For example, during the difficult financial market environment between 2000 and 2003, the benefits derived from having diversified revenues from more than one type of financial service proved to be far more limited than many observers had presumably anticipated. The work in questions, which was endorsed by both Committees, concluded that the profit experience during previous years offered only limited support for the business model “financial group”, although it was acknowledged that many groups had been formed only a short time before the downturn and, perhaps, that more time might be needed before such benefits could be realised. More recently, related discussions in other fora seem to suggest that there may be a growing perception that a period of “de-conglomeration” or “ungrouping” may lie ahead, with an increasing separation of joint ownership of insurance, commercial and investment banking activities. Such conclusions may be somewhat premature however, and they are not borne out by recent developments e.g. in the United States, where struggling financial entities have been absorbed by and merged with other entities (often with public support), in some cases involving entities with traditionally different types of activities. The recent financial crisis provides the IPPC and the CMF with a timely opportunity to update its earlier work, and related policy conclusions, in this area.

III  Selected issues

The role of the manner in which credit risks are being transferred

The problems at several insurance companies eventually surfaced because the institutions had provided credit risk protection in ways that required either the recognition of mark-to-market losses and/or the posting of additional collateral. One activity, which became increasingly important over time, consisted of providing credit protection in the form of selling (writing) credit derivatives. It has been argued for a while in some circles that the use of derivatives and related instruments has expanded the capacity of the financial system to distribute risks, including credit risks, and thereby has contributed to overall stability. Many observers argue in this context that the slicing and rebundling of risks enables the latter to be distributed in more granular form to those most willing, and supposedly also, best placed to bear them.

But recent events have called this conclusion into question. Indeed, some observers argue to the contrary that, rather than dispersing risk, this risk transfer process has tended to encourage the creation of additional risks, which are then passed on to other market participants. Moreover, they argue that the process is shrouded in complexity such that significant amounts of risks, including especially credit risks, have in fact been transferred to those entities least able to understand what risks they were assuming.

It is too early to draw firm conclusions regarding these hypotheses. But one preliminary conclusion that is emerging from recent developments is that credit derivatives markets have not been as effective as once thought in transferring credit risk off the balance sheets of commercial banks to other types of market participants. In fact, much of the risk thought to have been transferred actually remained within the global banking system and had merely been redistributed within and between national banking systems.
The losses disclosed by affected financial institutions are, thus far, largely mark-to-market losses on hard-to-value assets. It remains to be seen whether the full extent of the implied credit losses will eventually be realised on the underlying loans. If the outturns ultimately prove less severe than currently feared, then it cannot be ruled out that those financial firms still holding these assets will see some offsetting valuation gains on the asset-backed securities and structured credit products in their portfolios.

But to the extent that the choice of asset accounting categories (held-to-maturity versus trading books) plays an important role in explaining observed differences in the mark-to-market credit losses reported so far by the banking sector and by the various insurance sectors, it could be that insurers are actually holding future losses in held-to-maturity accounts. Thus, currently disclosed losses may underestimate the share of ultimate losses to be borne by the latter entities.

Continuing uncertainty about the (size and) spread of losses across financial sectors

It is difficult to estimate the ultimate repartition of losses among different financial sectors, as placement data for the various types of securities are imprecise. The separation of credit risk exposure from loan origination has implied that traditional sources of information on the distribution of risks within the financial sector provide less reliable references than they did in the past. It has become more difficult to understand the risk exposure of individual financial institutions as well as the aggregate exposures to credit and other risks of and flows of risks between different financial sectors. Published balance sheet data also provide less guidance regarding entities’ risk exposures than in the past, as these data give an imprecise picture of the risk exposures taken on or divested through derivatives or (complex) structured securities on both asset and liability sides of the balance sheet.

Take the example of losses related to US subprime debt. A number of approaches have been used to produce estimates of the expected losses. One approach uses data on (direct sub-prime debt exposure and) RMBS and CDO issuance to assess the split of subprime loans and losses first by product and subsequently by type of financial institution, based on estimates on investors in structured products. This top-down analysis suggests banks and securities houses hold just under half of total US subprime exposure. According to published estimates, insurance companies hold about a quarter of the total exposure (Goldman Sachs, November 2007). The exposures of insurance companies are skewed towards higher-rated CDO tranches, while other market participants such as hedge funds are thought to hold a disproportionate amount of lower rated tranches. As a result of these patterns, the ultimate losses by type of institution would be expected to be asymmetrically related to total exposures by type of institution. Note, in this context, that changes in market values of banking and insurance sectors in Europe and the United States since mid-2007 were broadly similar (Figures 4 and 5), even if AIG is taken out of the index.
The ultimate losses associated with the current financial crisis will not be confined to subprime-related securities, as the crisis has spread and the outlook for real activity has deteriorated significantly. The decline in real activity will have an adverse effect on the demand for many types of insurance products and insurance fraud is expected to increase, although the loss of confidence associated with crisis tends to be a positive for the demand for various insurance products. Insurance companies are major investors in equity and corporate bond markets and the considerable decline in the value of securities in these markets has generated capital losses for many insurers, which is reflected again in their own equity market valuations (Figures 6). According to one recent estimate, the insurance industry may have absorbed more than $143 billion of losses and write-downs from the crisis so far.8

In this context, note that life insurance companies have come under market valuation pressures (Figure 7), reflecting among other things the losses on their own investments in stocks and in mortgage-backed securities. In addition, these companies have written variable annuities contracts, many of which have guaranteed minimum income streams or other guarantees that are costly to fulfil in deteriorating capital market valuations. The credit rating outlook for the U.S. life insurance sector was revised to “negative” from “stable” at the end-of-September 2008 by at least one of the three major rating agencies, meaning that the agency expected downgrades to outnumber upgrades over the subsequent twelve months.
On the positive side, most insurance companies do not employ much leverage and have long-term liabilities, which implies that their exposures to liquidity risk is generally much lower than in the case of banks and other more leveraged financial institutions. One risk is, however, that credit ratings of insurance companies would be downgraded, and indeed, for example, the current rating outlook for insurance sectors by FitchRatings implies that the number of downgrades are expected to exceed the number of upgrades. To the extent that insurance companies are counterparties to any derivatives trades, margin requirements may increase as a result of rating downgrades, in which case liquidity needs in that sector would increase.

IV Concluding remarks

While the current financial crisis is primarily a banking crisis, as insurance industry representatives have emphasised on several occasions, including the IPPC’s last discussion of the issue in June 2008 and in the more recent Financial Roundtable with CMF delegates, insurance companies have nonetheless been affected and in mostly adverse ways.

One way is through their investment portfolios, which include exposures to subprime residential mortgage-backed securities and collateralised debt obligations based on such securities, to shares of financial service firms under stress, and to the debt securities issued by these firms. These portfolios also include exposures to other equity and debt securities the valuation of which is coming under pressure as the outlook for real activity deteriorates. At this point, expected losses on financial assets as a result of the financial crisis have spread well beyond the subprime mortgage universe. Where mark-to-market valuations of securities are used, losses become apparent more quickly, although the existence of liquidity premia may exaggerate the extent of losses ultimately realised on those securities (and may as well overestimate losses on the part of market participants). As insurance companies tend to focus on high-quality investments, they were relatively well protected initially during the period of financial turbulence, when asset value declines were concentrated in lower-quality and higher-risk assets. Insurance companies became increasingly more affected, however, as the turbulence developed into a full-grown crisis in which even high-grade securities were significantly affected.

In some market segments there is also underwriting exposure, in particular through issuance of mortgage guaranty coverage for lenders or financial guarantee coverage for structured financial products (including CDOs), and liability coverage for directors and officers and for errors and omissions for various entities with liability exposures related to the problems in financial markets.

And while insurance companies typically bear far less liquidity risk than commercial or investment banking firms, they are not completely immune, as rating downgrades could trigger collateral calls. In this context, it should be noted that central bank and other liquidity support is generally not as readily available for insurance companies as it is for banks, and it is perhaps too soon to know whether the liquidity support provided to AIG marks an important watershed in that respect. Under the current circumstances, liquidity risk management on the part of insurance companies is becoming an increasingly important task. The current financial market environment makes this task difficult, however, not least because banks are reluctant to extend new credit lines. Also, there is the risk that market participants might consider any massive drawing by an insurance company on existing lines, at the current juncture, as a sign that the situation at the company in question is worse than its peers. Similar considerations might apply as well to potential capital raising efforts, but the current market environment is not very receptive to such efforts, anyway.

On the positive side, every time a crisis or catastrophe hits, interest in guarantees and products providing some form of insurance rises. Indeed, actual losses and declining confidence typically provide a potent mix for changes in behaviours and in demand for specific types of financial products. This development should be beneficial for those insurance companies. Adopting such a view, reinsurers, despite
declines in their profits, have reportedly expressed confidence that the entire market would experience a
durable hardening of premium rates. Moreover, this development should benefit existing companies in
particular as new capital would be slow to enter the market.

There is indeed empirical evidence that (natural or man-made) catastrophes are not necessarily
“financial catastrophes” for insurance and in particular reinsurance companies, as their equity valuations
often outperform the general market subsequent to such events. It is not so clear to what extent this
argument can be applied to the current crisis, however. It is certainly too early to support such firm
conclusions as have been launched in the trade press,9 and it is not surprising that rating agencies tend to be
rather sceptical as regards the outlook for many major insurance sectors.10

Beyond the short-term monitoring and surveillance of developments in the insurance sector related to
the financial crisis, the current episode provides a timely opportunity for the IPPC to review its earlier
work and policy conclusions regarding the benefits from combining banking, insurance and other financial
activities under one roof. Earlier work by the IPPC and the Committee on Financial Markets indicates that
some diversification benefits from combining banking and insurance activities in a single financial group
exist, but may fall short of expectations exactly when they are needed most. Some commentators have
recently suggested that a period may lie ahead during which joint ownership of insurance, commercial and
investment banking institutions is increasingly separated. The financial crisis provides the IPPC with the
opportunity to review such suggestions and its own earlier conclusions regarding the benefits of the model
of bancassurance in which different activities are combined in one financial group. Such work could
provide a useful input for ongoing work on the regulatory and supervisory framework of financial groups
(see also Box 1) conducted in other fora.

Box 1: Questions regarding the macro-prudential framework for large financial groups

On a more fundamental level, further to the issue regarding the outlook for the business model of combining bank
and insurance services under one roof, recent developments raise the issue how large financial groups should be
treated in the context of the broader safety net and macro-prudential framework. The extension of the safety net to
investment banks and at least one large financial group dominated by an insurance company has put the spotlight on
the issue of the spectrum of institutions covered by the financial safety net.

Traditionally, financial safety net elements such as the deposit insurance and lender of last resort functions have
evolved with a focus on deposit-taking institutions such as (commercial) banks. These entities are an inherently
unstable part of the financial system and have the potential to cause significant economic disruption in the case of
failure. Failures of these entities generate negative externalities on their customers, especially small depositors and on
financial system stability, as a banking crisis can develop rapidly into a full-blown financial crisis, especially as these
entities’ balance sheets are highly leveraged and strongly interconnected.

But as a result of innovation, traditional distinctions between different financial activities, including banking,
securities dealing, and asset management, have become more blurred. As well, closer and more complex inter-
linkages in the financial system have facilitated spillover effects and implied that the systemic risk factors that
(commercial) banks are exposed to are more universal. Other financial institutions have become systemically important
as well, as underscored by recent experiences related to AIG. Policy interventions related to that company imply that
de facto some insurance companies enjoyed the provisions of one element of the financial safety net. Thus, the
question arises to what extent this situation needs to be reflected in changes in the scope of the other financial safety
net elements.

For example, if financial institutions enjoy elements of the financial safety net and sense that there exists an
implicit guarantee from the government in such situations, moral hazard is likely to arise. Under such circumstances,
the need for such regulation and supervision may increase even in the case of financial firms that are already subject
to considerable regulation and supervision motivated by policyholder protection concerns. But to what extent the public
sector should intervene in financial firms, however, is difficult to establish. Regulation imposes cost on financial
institutions and unnecessary regulation may damage the functioning of financial markets. Thus, a balance needs to be
struck between safety and soundness on the one hand and risk taking on the other.
NOTES

1 A version with only slight changes compared to the document tabled at the meeting is available as “Financial Turbulence: Some Lessons Regarding Deposit Insurance”, OECD, Financial Market Trends, Volume 2008/1, June.

2 According to one recent commercial bank estimate, home prices are likely to fall significantly further, and not bottom until 2010 in the US, as rising foreclosures are expected to continue depressing the housing market. See Deutsche Bank, Global Economic Perspectives, “Update on the Housing Outlook”, 20 November 2008.


4 For example, the Belgian-French financial services company Dexia SA posted a net loss of €1.5 billion for the third quarter of 2008, compared with a profit of €439 million a year earlier. Dexia, which has received a government cash injection, noted that a substantial part of the losses in the third quarter linked to the financial crisis stemmed from losses at Financial Security Assurance, which, the company said, it will sell to Assured Guaranty Ltd., a US bond insurer. See “Dexia to sell bond-insurance arm”, The Wall Street Journal, 17 November 2008.


6 See e.g. report on a recent IAIS conference in “Supervisors and rating agencies blamed for crisis”, in: World Insurance, Issue 849, 3 November 2008.

7 The asset valuation write-downs disclosed by many financial institutions, in particular large banks in the United States and Europe, went far beyond the expectations that had prevailed at the beginning of this year, among other things because banks were forced to take back impaired assets on their own balance sheets, which they had thought to have transferred to other market participants. Note, however, that write-downs in the banking sector may have progressed faster than in other sectors in which financial institutions’ balance sheets are not marked-to-market to the same extent. Implicit in these write-downs so far absorbed by financial institutions marking to market their asset-backed securities and structured credit products are market expectations of the ultimate amount of credit losses that will be incurred on the underlying mortgages. These losses in turn will be affected by affected by house price developments. Indeed, the final cost will depend on the eventual default rates and the loss-given-default rates – that is, the net losses that would be incurred by mortgage lenders after forced sales of the underlying housing collateral – both of which are dependent on these price developments.

