Committee of European Banking Supervisors

CEBS

18 June 2008

Report on issues regarding the valuation of complex and illiquid financial instruments

Executive Summary

Following the problems identified with the valuation of complex and illiquid assets in the context of the sub-prime crisis, CEBS was requested by the ECOFIN to contribute to promoting the reliable valuation of assets for which markets become illiquid, while ensuring compatibility with international financial reporting standards.

The present report reflects CEBS's efforts to meet this request and presents the findings that CEBS has made in the course of its work as well as a set of issues that should be addressed to promote reliable valuation.

In carrying out its efforts CEBS ensured that its findings are consistent with the recommendations of the report of the Financial Stability Forum 'Enhancing Market and Institutional Resilience', which it fully endorses, as well as the findings of the Senior Supervisors Group report 'Observations on Risk Management Practices during the Recent Market Turbulence' and of the Basel Committee on Banking Supervision report 'Fair value measurement and modelling: An assessment of challenges and lessons learned from the market stress'.

The report focuses its discussions on the following areas:

- o challenges for the valuation of complex or illiquid financial instruments;
- o transparency on valuation practices and methodologies as well as related uncertainty;
- o auditing of fair value estimates.

CEBS based its work on the experience gathered by its members in the exercise of their supervisory responsibilities, on the work already carried out in other fora, as well as on discussions with industry representatives. It led to the following major findings:

- On valuation challenges:

- o accounting standard setters should consider the need for further guidance on measuring fair values when there is little market activity in the instruments concerned (or other instruments relevant to pricing) ;
- o institutions should:
  - o enhance their practices and governance surrounding the use of modelling techniques;

    - o ensure that all appropriate risk factors are considered when determining a fair value; and
    - o improve risk management practices to ensure:
        - adequate risk assessment of transactions;
        - appropriate management of exposures.
  - o institutions and standard setters should consider wider valuation-related issues, including:
    - ▪ classification issues;
    - ▪ importance of timely impairment and possible changes to impairment rules for assets available for sale;
    - ▪ treatment of Day 1 profits and related reserves; and
    - ▪ impact and management of the own credit risk.

- On transparency aspects:
  - o institutions should enhance their disclosures on fair values and on valuation techniques;
  - o accounting standard setters should review the disclosure requirements to enhance the information to be disclosed on fair values and valuation techniques.

- On auditing aspects:
  - o auditing standard setters should pursue their efforts to enhance the guidance for the audit of fair value estimates.

In light of these findings, CEBS identified a set of issues to be addressed by banks as well as accounting and auditing standard setters to achieve sound valuation practices.

The issues to be addressed by banks focus on the valuation of assets for which markets come to be illiquid in time of stress, even though they are also valid more generally for the valuation of assets. In general, CEBS believes that risk management practices in the area of valuation should be noticeably enhanced.

CEBS aimed to ensure that its findings are compatible with international financial reporting standards. The report nevertheless reveals in a number of areas that there is a perceived lack of accounting guidance or a lack of clarity in this guidance. This has led CEBS to identify a number of issues to be addressed by the IASB and the IAASB.

CEBS recommends that institutions address the issues included in the report, in particular in those cases where they have been affected by the market turmoil. More generally it is recommended that all institutions carefully consider to what extent the issues raised in the report could be of use in improving the valuation of assets. CEBS encourages its members to monitor carefully how institutions deal with these issues.

CEBS will also follow carefully how accounting and auditing standard setters address the issues identified in the report and re-assess developments in this area. In this context CEBS will liaise with other interested fora, notably CESR and CEIOPS.

Table of content

Executive Summary 1

Table of content 3

I. Introduction 4

II. Objective and process 4

III. Overview of issues covered in the report 5

IV. Discussion of issues 6

IV.1. Challenges for the valuation of complex or illiquid financial instruments . 6

IV.1.1. Fair value hierarchy and the factors evidencing the existence of an active market 6

IV.1.2. Practices and governance surrounding the use of modelling techniques 8

IV.1.3. Appropriate risk factors to be considered when determining a fair value 9

IV.1.4. Wider valuation-related issues to be considered 11

IV.1.4.a) Classification issues *11*

IV.1.4.b) Impairment and possible changes to impairment rules for assets available for sale *13*

IV.1.4.c) Treatment of Day 1 profits and related reserves *14*

IV.1.4.d) Impact and management of own credit risk *15*

IV.1.5. Risk management practices in institutions 16

IV.1.5.a) Adequate risk assessment of transactions *16*

IV.1.5.b) Management of exposures *17*

IV.2. Transparency on valuation practices and methodologies as well as related uncertainty 18

IV.3. Auditing of fair value estimates 20

Appendix 1 - Issues to be considered by institutions and accounting and auditing standard setters in the context of the valuation of complex and illiquid financial instruments (with mapping to the FSF recommendations) 22

I. Introduction

1. The valuation of assets and liabilities has implications for an institution's financial position and the reading of its performance by users of financial statements. It influences measures that are of key importance for banking supervisors in carrying out their supervisory responsibilities, such as regulatory capital and risk weighted assets. Valuation is also an important component of the information that is needed to manage almost any banking risk including market risk, credit risk and liquidity risk.

2. In that respect the recent market turmoil revealed important weaknesses in banks risk management systems. It raised at the same time a number of issues regarding both the valuation of complex or illiquid financial instruments and the degree of transparency on those positions.

3. Against this background, the ECOFIN established a roadmap that identifies a set of key issues to be analysed and addressed following the market turmoil as well as a timeframe for reaching final conclusions and taking action. The relevant EU institutions and fora (Commission, Level 3 committees, FSC and ECB) are invited to carry out the necessary analyses and draw preliminary conclusions, while liaising at the same time with relevant international bodies and the industry.

4. Notably the roadmap requires CEBS to carry out work, together with other supervisors, accounting standard setters and other relevant authorities to come to *an agreement on a common approach to the accounting valuation of illiquid assets and the implications for risk management practices of banks*. In particular these efforts should look at those assets for which markets came to be illiquid in time of stress, while ensuring at the same time compatibility with international financial reporting standards.

5. In developing its work CEBS liaised with the other Level 3 committees (CESR and CEIOPS) to ensure that their efforts were not giving rise to major consistency or duplication issues.

II. Objective and process

6. The objective of this report is to identify and discuss the issues arising from the fair valuation of financial instruments for financial reporting purposes. It also addresses the related implications for banks' risk management practices and for the application of accounting and auditing standards. Valuation challenges arising from complex or illiquid instruments – mostly but not exclusively those affected by the sub-prime crisis – are addressed in particular. All financial instruments that are re-measured at fair value (fair value through profit or loss, available for sale assets (AFS) or hedging instruments) are within the scope of this report.

7. The report of the Financial Stability Forum (FSF) 'Enhancing Market and Institutional Resilience' dated 7 April provides a thorough analysis of the causes and weaknesses underlying the crisis as well as a comprehensive set of recommendations to be adopted by market participants, standard setters and regulators for strengthening and improving the financial system's resilience.

8. CEBS fully endorses the FSF recommendations and has structured its report around those recommendations that are related to valuation issues. Where appropriate, additional suggestions are provided on how valuation issues could be addressed and by whom. In doing so, CEBS draws on discussions among supervisors and experiences gathered in the exercise of their supervisory responsibilities by its members as well as on the work already carried out in other fora, especially the Basel Committee[1] and the Senior Supervisors Group (SSG)[2].

9. Discussions have also taken place with the industry. A first meeting with an industry expert group on valuation that had been set up with the CEBS's Consultative Panel took place on 6 May. The discussions at that meeting proved very helpful to shape and build the findings of the present report. We benefited also from various meetings with industry representatives that CEBS members held in their national capacity or when participating in other fora such as the Basel Committee or the Senior Supervisors Group.

10. The report takes a 'micro-supervisory' and EU-specific perspective rather than a macro-economic or financial stability point of view, although global financial stability concerns are also discussed when necessary.

11. It is not CEBS's role to provide interpretations of IFRS. Instead the report identifies a set of issues to be addressed in the context of practices for the valuation of complex or illiquid assets and suggests clarifications or improvements to existing accounting standards or related guidance.

12. While the report is primarily a CEBS response to the ECOFIN mandate the work can also serve as input to or guidance for further work to be carried out either by CEBS or other interested parties, including the industry, accounting standards setters and auditors.

III. Overview of issues covered in the report

13. While adopting a 'micro-supervisory' perspective rather than a macro-economic or financial stability point of view, the report incorporates a discussion of important related topics such as disclosure requirements and other relevant issues.

[1] In early 2007, the Basel Committee on Banking Supervision (BCBS) started a project to gain a better understanding of banks' fair valuation processes. This project was subsequently extended to the analysis of the consequences of the market turmoil. The findings of this project have been published in the report 'Fair value measurement and modelling: An assessment of challenges and lessons learned from the market stress' on 12 June 2008. The BCBS is scheduled to issue a supervisory guidance for assessing banks' valuation practices later this year.

[2] The Senior Supervisors Group (SSG) - which brings together senior financial supervisors from five countries - issued on 6 March a report that assesses a range of risk management practices among a sample of major global financial services organizations. This report among other things underlines the importance for institutions to exercise critical judgment and discipline in how they value their holdings of complex or potentially illiquid securities both before and after the onset of the market turmoil. The SSG also issued on 11 April a report that reviews the disclosure practices of financial services firms concerning their exposures to certain financial instruments that the marketplace now considers to be high risk.

14. The report covers:

- o challenges for the valuation of complex or illiquid financial instruments;
- o transparency on valuation practices and methodologies as well as related uncertainty;
- o auditing of fair value estimates.

IV. Discussion of issues

IV.1. Challenges for the valuation of complex or illiquid financial instruments

15. The main challenges that were revealed by the market turmoil in terms of valuation of complex or illiquid financial instruments can be grouped under the following topics:

- ⇨ Fair value hierarchy and factors evidencing the existence of an active market.
- ⇨ Practices and governance surrounding the use of modelling techniques.
- ⇨ Appropriate risk factors to be considered when determining a fair value.
- ⇨ Wider valuation related issues to be considered.
- ⇨ Implications for risk management in banks.

IV.1.1. Fair value hierarchy and the factors evidencing the existence of an active market

Box 1

IAS 39 (as well as IFRS 7 on disclosures) and the US standard FAS 157 provide definitions of fair value hierarchies that are of similar structure and are based primarily on quoted prices in active markets (level 1 in FAS 157), then on modelling techniques based on observable inputs (level 2 in FAS 157) and finally, in the absence of the former, on modelling techniques based on non-observable inputs (level 3 in FAS 157). During the crisis the fair value hierarchy as defined in FAS 157 has attracted increasing attention.

Although the definitions and boundaries are not exactly the same, this report uses for reasons of convenience the FAS 157 terminology (levels 1 to 3) when discussing the application of the IAS 39 fair value hierarchy.

16. Prior to the market turmoil, complex structured and bespoke credit products that were most affected by the sub-prime crisis were often valued based on a variety of inputs as there was little secondary market activity. Valuation techniques included among others the pricing of instruments on the basis of new originations for similar products or the use of consensus pricing services (including market indices).

17. In some cases the development of the crisis, especially the drying up of liquidity in some markets, took institutions by surprise. The sudden disappearance of pricing inputs that were deemed observable prior to the crisis necessitated the quick development of modelling techniques. The complexity of products to which the models had to apply was compounded by governance issues arising from the need to develop and verify these methodologies under significant market, resource and time pressures.

18. In this environment, significant differences and inconsistencies were observed between and within institutions as regards the process of resorting to modelling techniques, especially in early phases of the crisis. While such differences were often due to risk management issues within the institutions[3], they could also require the clarification of key concepts of the fair value hierarchy and the criteria for determining whether a market is active or not.

19. The lack of more precise guidance about what constitutes an active market or an observable input may have exacerbated risk management issues in banks. For instance, a stricter definition of what could constitute a level 1 measurement (i.e. the need for actual trades in the market) would prevent banks from incorrectly classifying some instruments in the upper level of the fair value hierarchy and would foster the adoption of valuation methodologies that are based on more risk sensitive information and a better understanding of the underlying characteristics of the transactions. In the same way, a number of industry representatives questioned whether a fair value estimated on the basis of a valuation technique using observable inputs, but characterised by high model risk should classified as level 3 instead of level 2.

20. In particular the use of consensus pricing services (and quotations from brokers when not supported by actual trades) to estimate fair values raises questions about which level of the fair value hierarchy such estimates should be attributed to. In particular the question arises under what conditions such prices represent actual and regularly occurring market transactions. A number of industry representatives expressed the view that such valuations should not be considered as level 1 or even as level 2 fair values, unless, in the latter case, they are supplemented by other observable market input to corroborate the valuation. Despite those comments, the industry considered consensus pricing services to be very useful for the valuation of some financial instruments, either as a direct input to the valuation or as a benchmark to challenge or to calibrate internal estimates made by institutions.

21. CEBS believes that there is a need to clarify the criteria for determining what constitutes an active market and what can be considered an observable input in IAS 39.

22. In their meeting with CEBS, industry representatives mentioned criteria that can be used to determine whether a market can be considered to be active or whether pricing inputs are observable. The most commonly cited criteria included: spreads, volumes, number of counterparties and two-way versus one-way

[3] Risk management issues have been discussed in particular in the aforementioned SSG and BCBS reports published respectively on 6 March and 12 June 2008. CEBS largely concurs with the observations made in these reports.

markets [4]. It was also noted that 'offered' prices do not always lead to actual transactions confirming the value. While CEBS does not endorse these criteria as such, we believe that some of them could deserve consideration by the working group on the valuation of illiquid instruments that is in the process of being established by the IASB.

Issues to be addressed:

⇨ *IASB to clarify the circumstances and criteria under which institutions should resort to modelling techniques and to provide further guidance on what can be considered to be active markets and what constitutes observable inputs.*

⇨ *The IASB to issue guidance to improve the consistency of the classification of fair values between the different hierarchy levels across institutions. In particular the guidance should clarify under which conditions:*

- *valuations that rely solely on primary market transactions for similar instruments can be used in the context of the classification of fair values in the hierarchy, and*
- *consensus pricing services (and quotations from brokers when not supported by actual trades) can be used as input to the fair valuation process and for purposes of classification into the fair value hierarchy.*

IV.1.2. Practices and governance surrounding the use of modelling techniques

23. On the whole valuation difficulties were more acute for institutions which, prior to the crisis, relied only on few pricing sources. This is especially true when such pricing sources were deemed observable in markets with thin liquidity and when institutions did not have a clear assessment of the underlying risks and components of a transaction. It has been observed that, in the beginning of the market turmoil, these institutions may have been slow to adapt their valuation practices to address the deterioration in the performance and liquidity of the transactions.

24. These difficulties were often amplified by the lack of appropriate resources (both in terms of quality and quantity) dedicated to model approval and review, independent price verification and stress testing, as well as internal control units.

25. As a result, significant heterogeneity was initially observed between institutions with respect to the modelling techniques and input factors they considered for the valuation of similar instruments. While differences between modelling techniques are not a cause of concern as such, there have been doubts as to whether the modelling techniques and the related input factors were in all cases adequate for the determination of reliable fair values.

26. In some cases, heterogeneity was also observed within banking groups, where different business units were not always subject to the same level of

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[4] A one way market is market where banks are sellers only and their counterparties are buyers. As a result there is no active market making from banks in the products and counterparties have difficulties finding other buyers.

scrutiny as regards independent price verification and model validation. This was the case in particular for some subsidiaries and some asset management units.

27. It should be noted however that the more material differences tended to be resolved over time, in part due to the application of recommendations issued by the audit industry[5].

28. These observations underline the need to enhance the governance surrounding the use of modelling techniques and valuation practices in general.

29. The development of sound and robust valuation methodologies in good times and their disciplined and consistent application by appropriately staffed units should help strengthen institutions' capacity to assess and challenge market prices and produce reasonable valuations during periods of stress. This should mean that firms consider and regularly review and challenge the quality of valuation inputs (including consensus pricing services, the use of indices, prices for similar transactions…), methodologies and other risk factors that are necessary to assess valuation uncertainty.

Issues to be addressed:

- ⇨ *Institutions to devote sufficient resources, both in terms of quality and quantity, to model approval and review, independent price verification and stress testing, as well as to internal control units. Consistent and rigorous valuation practices should be applied throughout a banking group.*
- ⇨ *On a regular basis, institutions to assess the need to develop back-up valuation models for complex or potentially illiquid instruments.*

IV.1.3. Appropriate risk factors to be considered when determining a fair value

30. Fair valuation practices should be markedly enhanced to incorporate all available information and appropriate risk factors in order to improve the reliability of the output. Notably due consideration should be given to:

- assessing model risk and any adjustment that may be necessary to reflect modelling uncertainty when fair valuing financial instruments in the absence of active markets;
- factoring in adequate market liquidity premia in the valuation of financial instruments;
- ensuring that counterparty credit risk, which came up in particular in the context of CDO exposures subject to a 'hedge' with a credit default swap,

[5] In October 2007 the Center for Audit Quality (CAQ) – a US body created in January 2007 in order to foster confidence in the audit process - issued among others the paper 'Fair Value Measurements in illiquid (or Less Liquid) Markets". This paper discusses measurement of fair value under existing US GAAP (most of which is contained in SFAS 157 Fair Value Measurements) in the context of illiquid (or less liquid) market conditions. In December 2007 the six largest accounting networks have joined forces under the auspices of the Global Public Policy Committee (GPPC) and issued a paper entitled Determining Fair Value of Financial Instruments under IFRS in Current Market Conditions. The objective of the paper is to enhance awareness of the requirements of IFRS in relation to the determination of fair value of financial instruments and related disclosures. It is similar in essence to the paper issued by the CAQ.

is adequately reflected: more generally, CEBS believes that counterparty credit risk for derivative instruments, including plain vanilla instruments such as interest rate swaps, may have not always been properly considered in current market practices.

31. IAS 39 AG82 lists a number of relevant risk factors that an institution can use for the fair valuation of a financial instrument, provided that they are relevant to the fair valuation process for that particular instrument. These include the time value of money (i.e. interest at the basic or risk-free rate), credit risk, foreign currency exchange prices, commodity prices, equity prices, volatility (i.e. the magnitude of future changes in the price of the financial instrument or other item), prepayment risk and surrender risk, and servicing cost for a financial asset or a financial liability. The application guidance specifies that valuation '...will be based on one or more (or perhaps other)...' of these factors.

32. While the list defined in AG82 is principles based and does not preclude the use of other information in fair valuing a position, it could be noted that such a list does not include the three particular risk factors that proved to be the major reasons for the adjustments made during the crisis: liquidity risk, model risk and counterparty risk[6]. Accordingly, CEBS believes that they should be explicitly covered in the list provided in the application guidance.[7]

33. Industry representatives however strongly advocated that risk factors are not necessarily adding up on an instrument by instrument basis. For instance, considering a counterparty risk adjustment instrument by instrument might result in over-estimation of the risk if the institution operates under a netting agreement with the counterparty. In such a case, considering some risk factors (such as counterparty risk or model risk) at the portfolio level might be appropriate, provided that there is no over-reliance on net exposures. It is not clear though whether under IAS 39 institutions have some latitude in the determination of the applicable unit of account, as this issue is labelled in the accounting literature.

34. Some industry representatives hold the view that, while fair valuation practices for risk management purposes and for reporting purposes are essentially similar – a desirable result in CEBS's view - some unintended differences might arise due to diverging features between supervisory and accounting standards. Others believe that ambiguities in the standards might have prevented or made more difficult the incorporation of all appropriate risk factors in fair valuation practices.

35. As far as prudential regulation is concerned, the prudent valuation guidance as defined in part B of Annex VII of Directive 2006/49/CE currently applies to the regulatory trading book only. However, given the increasing use of fair valuation

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[6] Counterparty risk is the credit risk that is incurred on the counterparty to a structured or derivative transaction. It differs from credit risk that is incurred on the assets underlying a structured or derivative transaction. Proper assessment of the counterparty risk may be an essential part of the fair valuation process for some transactions. For instance, if an institution is buying credit protection on a specified asset, the fair value of this asset is influenced by the expected cash flows stemming from the protection. Those cash flows are in turn influenced by the credit standing of the seller of protection –i.e. the counterparty risk.

7 It should be borne in mind in this context that the IASB has recently clarified in its discussion paper "Preliminary views on insurance contracts", published in May 2007 the concept of a risk margin as an adjustment for uncertainty surrounding the best estimate of future cash flows.

for financial instruments included in the banking book, it would be desirable to extend this guidance to the regulatory banking book also.

36. Finally CEBS suggest that the IASB clarifies whether inputs from stress testing exercises can be incorporated in the fair valuation of financial instruments and how this compares to other projects (such as the revision of IFRS 4). In any case, stress testing could be useful in assessing:

- the degree of potential illiquidity of a market - if stress tests show that a market is vulnerable to liquidity problems, banks should set up alternative valuation techniques in case of the sudden disappearance of the liquidity that would make price discovery more difficult; and
- the extent of valuation uncertainties - which could be adequately discussed in disclosures.

Issues to be addressed:

- ⇨ *Institutions to enhance their risk management practices, notably as regards the incorporation of all appropriate risk factors in valuation practices.*
- ⇨ *The IASB to clarify the list of factors that should be considered as input to valuation techniques in the application guidance to IAS 39 (AG82). Factors needing further consideration include counterparty risk, liquidity risk and model risk. The IASB should in this context also clarify the approach to unit of account in IAS 39.*
- ⇨ *Directive 2006/48/CE to be amended to ensure that the 'prudent valuation methods', 'valuation adjustments and reserves' and 'standards for less liquid positions' sections of Directive 2006/49/CE, Annex VII, part B apply to all positions that are fair valued, whether in the regulatory trading book or in the banking book.*

IV.1.4. Wider valuation-related issues to be considered

IV.1.4.a) Classification issues[8]

Box 2

IAS 39 requires an entity to assign financial instruments (among them securitised assets and structured products) at origination or at inception (i.e. at initial recognition) to different categories, with varying effects on their valuation as well as on the recognition of valuation differences. As a result, the classification has repercussions for an institution's revenue and equity positions.

In practical terms, the differences also impact the timing and the method of recognising valuation differences as well as impairment.

To recall, there are five categories of financial instruments:

8 In this report the term classification is used in the context of classifying an instrument at initial recognition. The term reclassification is used in the context where an instrument is already held or issued.

- Trading assets and liabilities. Those assets and liabilities are measured at fair value, with changes in fair value recognized in the profit or loss account.
- Assets and liabilities fair valued under the fair value option. Those assets and liabilities are also measured at fair value, with changes in fair value recognized in the profit or loss account.
- Available for sale assets (AFS) (no equivalent on the liability side). Those assets are measured at fair value, and the changes are recognized directly in equity. However, if there is objective evidence that a financial asset classified as available for sale is impaired, the whole latent loss recognised in equity shall be transferred to the profit or loss account.
- Held to maturity assets (no equivalent on the liability side). Those assets are measured at amortised cost. Impairment shall be recognised if there is objective evidence that credit losses have been incurred.
- Loans and receivables (equivalent to liabilities at amortised cost). Those assets are measured at amortised cost. Impairment shall be recognised if there is objective evidence that an impairment loss has been incurred.

37. The criteria for subsequent reclassification of financial instruments between different categories are very strict in IAS 39. In particular, the reclassification of an instrument out of the fair value through profit or loss category is prohibited (whether the instrument is in trading or fair valued using the fair value option). Moreover, institutions are prohibited from selling held to maturity instruments, with the penalty of having to reclassify their entire held to maturity portfolio into the available for sale category and being prevented from using the held to maturity category during the next two financial years. In other words, institutions have to express a business intention when originally classifying their exposures on their balance sheet and, in order to prevent potential abuses, cannot modify their intention subsequently.

38. CEBS members generally have little concern regarding reclassification rules applicable in IAS 39.

39. Some specific issues can be noted however regarding classification as well as reclassification requirements:

- Some institutions have noted that they do not apply the same valuation processes or levels of diligence to different categories of financial instruments or to fair values that are purely used for purposes of disclosure in the notes to the financial statements.
- Some level of inconsistency in practices has been noted as regards the classification of newly originated exposures that were initially intended for securitisation or syndication (warehousing exposures). It would be desirable that the IASB, or auditing practices, clarify whether it is possible to classify such exposures elsewhere than in the trading category.
- The industry pointed to various issues of consistency with the classification or reclassification rules between US GAAP and IFRS that may have important impacts on valuations. For instance, while under IFRS reclassification out of the trading category is prohibited, this would remain possible in rare circumstances under US GAAP (FAS 115 paragraph 15). In the same way, it would be possible to reclassify certain loan positions 'held for sale' in US GAAP

(those positions are valued at the lower of cost or fair value) into the 'held for investment' category (similar to the loans and receivables category in IFRS, which is valued at amortised cost). It seems also that US GAAP allow for some structured CDO positions to be classified as available for sale instruments whereas the same instruments would have to be fair valued through profit or loss under IFRS.[9] It would be advisable for accounting standard setters to analyse further and eliminate such differences with a view to maintaining the quality of IFRS standards in this area.

- The IFRS accounting guidance regarding the possibility of reclassifying loan positions from the loans and receivables category to the available for sale category and vice versa is not clear.

Issues to be addressed:

⇨ *Institutions to enhance their policies and procedures as regards the initial classification of financial instruments into an accounting category, being mindful of the strict reclassification rules that exist in IAS 39. Notably, accounting classification should not be used with the view to achieving a particular capital treatment if this is disconnected from the business intent of the institution.*

⇨ *Institutions to apply the same valuation processes and diligence when valuing financial instruments irrespective of the accounting categories that they have been allocated to or whether the fair values are purely used for disclosure.*

⇨ *The IASB to clarify whether it is possible to classify exposures intended for securitisation or syndication elsewhere than into the trading category when securitisation or syndication does not occur.*

⇨ *In the same way it should be clarified whether it is possible to reclassify loan positions from the loans and receivables category to the AFS category and vice versa.*

IV.1.4.b) Impairment and possible changes to impairment rules for assets available for sale

40. There are practical differences in IAS 39 between the mechanics and determination of impairment for available for sale financial instruments and impairment for financial instruments at amortised cost. Impairment for instruments at amortised cost is related to the occurrence of a (credit) loss event and is estimated using the original effective interest rate (i.e. without taking into account subsequent variations in interest rates). Impairment for available for sale assets incorporates the entire latent losses at the time of impairment, including when such latent losses are due to other market factors than credit risk.

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[9] FAS 133 paragraph 14B (introduced by FAS 155) explicitly states that the concentration of credit risk in the form of subordination of one instrument to another shall not be considered an embedded derivative. This clarification is not provided in IAS 39. As a result, under a strict interpretation of IAS 39, it could be considered that the subordination feature incorporated for example in a CDO is an embedded credit risk derivative. As such a derivative could not be easily measured separately; it would force the holder to classify the transaction as at fair value through profit or loss.

41. When equity instruments in the available for sale category are impaired, such impairment cannot be reversed.

42. In order to avoid institutions refraining from timely recognition of impairment, consideration should be given to a possible change to impairment rules applicable to available for sale instruments, notably:

- to allow for the reversal of 'write-downs' of equity instruments through profit or loss (up to the original carrying amount); indeed, allowing banks to reverse impairment when the situation of the entity improves could help to alleviate problems of timely recognition and 'under-impairment' for equity classified as available for sale; and
- to limit impairment of debt instruments into the available for sale category to the sole credit component, in a manner consistent with the rules applicable to instruments at amortised cost.

43. Timely recognition of impairment is particularly critical from a prudential point of view, due to the prudential filters applying to assets available for sale:

- for equities, unrealised losses should be deducted (after tax) from original own funds and unrealised gains should only partially be included in additional own funds before tax;
- for loans and receivables, the unrealised gains and losses, apart from those related to impairment, are neutralised in own funds (after tax); and
- other available for sale assets (i.e. debt securities, financial instruments subject to interest rate risk) can be treated (consistently) as equities or as loans and receivables.

44. The prudential filters that are in place for available-for-sale assets have proved effective. However CEBS holds the view that it is crucial to underline the importance for banks to proceed with timely recognition of impairment to ensure that the deterioration of assets credit quality is reflected on a timely basis in institutions' balance sheets and results and, not least, in their regulatory capital.

Issues to be addressed:

- ⇨ *Institutions to ensure rigorous implementation of the impairment rules for instruments that are classified as available for sale and ensure that the deterioration of assets' credit quality is reflected on a timely basis in institutions' financial statements and regulatory capital.*
- ⇨ *The IASB to examine possible changes to the impairment rules for available for sale assets.*

IV.1.4.c) Treatment of Day 1 profits and related reserves

45. Day 1 profits or losses represent the difference between a transaction price for a financial instrument and the requirement to mark instruments at exit price fair values. IAS 39 allows for the recognition of such gains or losses for fair values that are based on active markets or on valuation techniques using only observable data. FAS 157 permits the recognition of Day 1 profits even if the inputs to the valuation technique are unobservable (i.e. Level 3).

46. Industry representatives have argued in favour of a level playing field between IFRS and US GAAP although there are mixed views regarding the desirability of booking Day 1 profits/losses on level 3 instruments. Some representatives expressed the view that under IAS 39 there are incentives to classify instruments as level 2 rather than level 3. In any case it became apparent from the discussions with the industry that there is a lot of heterogeneity of practices both for the recognition and for the determination of these profits.

47. Moreover IAS 39 does not specify how to account, in subsequent financial periods, for Day 1 profits for which initial recognition was not allowed. It has been observed that several approaches are being used: these include amortising the Day 1 profit either over the contractual life of the transaction or over the period during which the valuation parameters are expected to remain non-observable; deferring the recognition of that component until maturity or until settlement; and deferring it until the profit or loss is offset by other opposite transactions or until it is realised.

48. This diversity of behaviour hampers the comparability of financial statements. In fact the amounts recognised in profit or loss can be materially different depending on the accounting approach chosen. The explicit development of only one accounting treatment for Day 1 profits or losses would help to avoid these divergent behaviours.

Issues to be addressed:

- ⇨ *The IASB to clarify the accounting provisions with regard to the treatment of Day 1 profits and losses to ensure consistency in this respect.*

IV.1.4.d) Impact and management of own credit risk

49. During the market turmoil, a number of banks have reported gains in net trading income from changes in the fair value of financial liabilities designated at fair value attributable to changes in the institutions' own credit risk. In some cases the change only applies to those financial liabilities designated at fair value where the own credit risk would be considered by market participants and excludes fully collateralised transactions and other instruments for which it is established market practice not to include an entity-specific adjustment for own credit risk. Some degree of heterogeneity has been observed in that respect.

50. It seems also there are different methods for estimating the effect of own credit risk. In some cases the effect is calculated on the basis of a yield curve generated from observed external pricing for funding associated with new senior debt issued by the institution. It can also be derived from spreads or from ratings or a combination of these methods. Before the crisis and for practical reasons it seems that institutions also resorted to "crystallising"[10] the impact of own credit risk in order to avoid undue variations in normal times, provided that those variations were not material. Due to the market turmoil it seems that banks have largely abandoned this practice.

[10] I.e. the daily movements of an institution's spread on the markets were not incorporated in the pricing of that institution's fair valued liabilities, provided that the institution could demonstrate that its spread was in the long term essentially stable on average.

51. In terms of disclosures IFRS 7 permits an entity to determine this amount using as a proxy the amount of change in the fair value that is not attributable to changes in market conditions that give rise to market risk. These disclosure requirements apply only to liabilities that are fair valued under the fair value option. However these disclosure requirements do not apply to trading liabilities even though they account for a significant proportion of the impacts observed as a result of the market turmoil.

52. Whereas the sub-prime crisis led to the recognition of own credit risk gains, it is important that there is awareness that these gains will be re-absorbed when market conditions, and thus institutions' credit standings improve. It is important also to be aware that this may take effect before the improvement of the market conditions actually affect the strained exposures (i.e. the market perception of the credit standing of the bank could improve before there is an improvement in the credit standing of the assets).

53. In any case, CEBS reiterates its view that gains and losses relating to changes in own credit risk arising from the application of the fair value option to liabilities should not be reflected in an institution's profit or loss.

54. In the prudential context valuation differences relating to changes in own credit risk arising from the application of the fair value option to liabilities are neutralised in regulatory capital. In fact the adjustments introduced by Directive 2006/48/CE apply irrespective of whether the liabilities are designated at fair value or held for trading. The question arose whether this treatment is justified for liabilities that are held for trading as it was felt by some industry representatives that, in a trading environment, the effect of own credit risk should be incorporated in the pricing due to the short term profit taking nature of the trading category.

Issues to be addressed:

- ⇨ *The IASB to clarify the accounting provisions to ensure consistency with regard to the determination of the effect of own credit risk and to enhance disclosures on own credit risk for liabilities held for trading.*
- ⇨ *Institutions to create awareness in the market that in the event of an improvement in market conditions previously recorded gains stemming from financial liabilities designated at fair value attributable to changes in institutions' own credit risk will be absorbed by corresponding losses.*

IV.1.5. Risk management practices in institutions

IV.1.5.a) Adequate risk assessment of transactions

55. The market turmoil demonstrated that institutions were not always fully aware of the risks that they were incurring with respect to sub-prime and other exposures affected by the crisis. It can be questioned whether institutions carried out the necessary due diligence analyses before engaging in activities that involved the issuing of or the investing in structured products.

56. This applies in particular to the criteria that have been applied to select the investments and the relevance of such criteria for the valuation of the products. Institutions should not solely rely on external ratings to guide them in their investment decision. External ratings should only be one factor or criterion that they use in their decision. It is crucial in that context that institutions obtain sufficiently detailed disclosure on the assets underlying securitised or structured products and their performance. Such information is key not only for investment decisions but also for the capacity to produce sufficiently reliable valuations in times of stress.

57. Obviously the question of adequate risk assessment is closely connected to basic governance and sound risk management as well as robust control practices that institutions should adhere to.

Issues to be addressed:

- ⇨ *Institutions to apply sound criteria for investment and business decisions and to diligently analyse the related underlying risks and characteristics of a transaction prior to engaging in it. In the absence of appropriate information that would complicate the valuation of the position in times of stress, it is expected that institutions will refrain from engaging in the transaction.*

- ⇨ *The EU industry associations to continue their efforts to ensure that investors obtain all relevant information with respect to complex financial instruments (especially as regards structured products and securitisation activities).*

IV.1.5.b) Management of exposures

58. It has been observed in a number of cases that institutions manage their exposures to structured products on a net basis. This observation has been made particularly in the context of 'negative basis trades' that institutions have engaged in to benefit from spread differences between credit default swaps and the exposures for which the protection has been bought. While this practice may have been sensible from a risk management point of view (hedging of gross exposures), it seems that at times institutions lost sight of the absolute size of their exposures and as a result did not adequately manage the counterparty risk incurred with respect to the providers of credit risk protection.

59. In addition, institutions did not always seem to recognise on a timely basis that under stressed conditions there was a risk of positive correlation between the different arms of the 'hedging' transaction they had engaged in (e.g. deterioration of the credit standing of the monoline insurers in parallel with the deterioration of the credit standing of the underlying assets, due to over-exposure of the monoline insurers to these troubled assets).

Issues to be addressed:

- ⇨ *Institutions to pay due attention to both net and gross exposures in managing their risks and to adequately take into account correlation and concentration risks when 'hedging' exposures.*

IV.2. Transparency on valuation practices and methodologies as well as related uncertainty

60. Disclosures are generally accepted to be a key contributor to market discipline and market confidence. The issues raised in the following paragraphs should be considered in close conjunction with the report CEBS has prepared in parallel to assess banks' transparency with regard to activities and products affected by the market turmoil.[11]

Box 3

IFRS 7, which came into force on 1 January 2007, requires disclosure of the significance of financial instruments for an entity's financial position and performance as well as qualitative and quantitative information about exposure to risks arising from financial instruments. More specifically with respect to fair values and valuation techniques IFRS 7 contains a number of requirements for disclosures that an institution has to make.[12]

61. While the current disclosure requirements with regard to fair values and valuation techniques are rather substantial, CEBS's analysis of current disclosures shows that there are important differences in terms of the level of detail of the disclosures and their presentation. CEBS acknowledges however that part of this heterogeneity is related to the fact that in many cases IFRS 7 has been applied for the first time.

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[11] The CEBS report on 'banks' transparency on activities and products affected by the market turmoil' has been published on 18 June 2008 and can be accessed on CEBS's website at: http://www.c-ebs.org/press/20080618a.htm .

[12] In summary these cover the following disclosures:

- for each class of financial assets and financial liabilities, the fair value of that class of assets and liabilities in a way that permits it to be compared with its carrying amount;
- the methods and, when a valuation technique is used, the assumptions applied in determining fair values of each class of financial assets or financial liabilities;
- whether fair values are determined, in whole or in part, directly by reference to published price quotations in an active market or are estimated using a valuation technique;
- whether the fair values recognised or disclosed in the financial statements are determined in whole or in part using a valuation technique based on assumptions that are not supported by prices from observable current market transactions in the same instrument (i.e. without modification or repackaging) and not based on available observable market data;
- the total amount of the change in fair value estimated using such a valuation technique that was recognised in profit or loss during the period;
- if a difference between the fair value at initial recognition and the amount that would be determined at that date using the valuation technique exists, an entity shall disclose, by class of financial instrument its accounting policy for recognising that difference in profit or loss; and the aggregate difference yet to be recognised in profit or loss at the beginning and end of the period and a reconciliation of changes in the balance of this difference.

62. Moreover, it was noted that the level and content of disclosure requirements were different in IFRS 7 and in US GAAP.

63. The analysis showed that institutions provided a good deal of qualitative information on the valuation methods, on the processes and on their use. At the same time the information that has been provided on the assumptions underlying the valuation techniques is scarcer.

64. As an example IFRS 7 makes it compulsory for an entity to disclose information about its assumptions relating to prepayment rates, rates of estimated credit losses, and interest rates or discount rates. However, detailed information has only been provided in a limited number of cases.

65. Similarly, information on the type of adjustments applied to reflect model risk and other uncertainties was rather limited and, where provided, rather generic.

66. There is a need for institutions and market participants to improve their communication on the impacts of fair valuation (both negative and positive) as well as on the uncertainties it implies. For key material exposures, disclosures could incorporate for instance valuation ranges based on a variety of inputs and assumptions.

67. Obviously the disclosures reflect to some extent the differences that can be observed in terms of valuation practices among institutions and which have been discussed in earlier parts of this report.

68. The following issues should not be considered exclusively in the context of the current market turmoil. They aim to contribute in the longer run to an improvement in institutions' disclosures on valuation related issues.

Issues to be addressed:

- ⇨ *Institutions to enhance their disclosures on fair values and on valuation techniques by providing information on:*
  - *financial instruments to which fair values are applied;*
  - *treatment of Day 1 profits (including quantitative information);*
  - *use of the fair value option (including its conditions for use) and related amounts (with appropriate breakdowns);*
  - *the fair value hierarchy, including a breakdown of all exposures measured at fair value by different levels of the fair value hierarchy, with a breakdown between cash and derivative instruments and disclosures on migrations between the different levels;*
  - *a description of modelling techniques and of the instruments to which they are applied, in particular:*
    - *valuation processes, including the assumptions and input factors institutions use in modelling techniques;*
    - *the type of adjustments applied to reflect model risk and other valuation uncertainties;*
  - *sensitivity of fair values; and*
  - *stress scenarios.*

⇨ *The IASB to review IFRS 7 in the light of the current developments and consider in particular the incorporation of quantitative disclosures on fair values determined under each of the different levels of the fair value hierarchy, as well as quantitative disclosures on stress scenarios reflecting the sensitivity and uncertainty of valuations.*

IV.3. Auditing of fair value estimates

70. External audits, performed in accordance with high quality auditing and ethical standards, are an important element in supporting market confidence in the valuations, and disclosures around the valuations, that are provided by banks in their annual reports. Most EU jurisdictions follow audit standards that are either the international auditing standards (ISAs) issued by the IAASB or are based to a substantial extent on the ISAs.

71. With the current challenges for preparers of financial reports in their valuation of financial instruments where markets are illiquid, audit has become even more important as a key element supporting market confidence. In the recent reporting period, auditors have had to focus more of their time on whether these valuations, and the relevant disclosures, are appropriate.

72. In undertaking valuations of assets, where their markets have become illiquid, there are particular challenges for banks in establishing models which generate reliable fair value estimates, and therefore for the audit of those values. The models will be established based on various assumptions which will be generated by reference to internal or external reference points. Where these valuations are material to the overall financial position of the bank, audit work will need to focus on the controls around the models used to generate the valuations as well as the substantive procedures needed to evaluate the appropriateness of the values generated by the models. It is also even more necessary for auditors to draw on sufficient technical expertise to establish the appropriateness of the models and their assumptions. We are aware that some audit firms have developed specific tools to assist them in their assessment of, and challenge to, their audit clients' fair values.

73. It is difficult for auditors to evaluate the extent to which it is appropriate for banks to use internally generated assumptions to value those assets where markets are illiquid, or whether banks should use external indices, and the implied assumptions which are available, even though such assumptions may not seem to reflect economic fundamentals.

74. For market confidence, banks need to disclose clearly the way in which they have valued these illiquid assets and the imprecision around the valuations. Therefore there needs to be sound audit guidance and practice on the audit work to be undertaken in evaluating:

- the controls around valuation practices;
- the identification of appropriate assumptions for the use of modelling techniques; and
- the related disclosures.

75. In its 2007 comment letter on ISA 540 (Revised and Redrafted), Auditing Accounting Estimates, Including Fair Value Accounting Estimates, and Related Disclosures, CEBS provided suggestions on how to enhance the guidance in the auditing standard that covered the areas of controls and disclosures of fair values involving estimates. Many of these suggestions were incorporated in the revised ISA 540 which was released in February 2008.

76. Some EU jurisdictions have provided helpful summaries of the key audit points in existing audit standards which are of particular relevance given the uncertainty around some valuations in difficult trading conditions e.g. the need to ensure there is appropriate technical expertise in the audit team and to focus on the audit of valuations and related disclosures.

77. We also note that the IAASB has established a task force to consider the lessons learned from the market turmoil and the need, where necessary, to enhance the audit guidance for audits of valuations of illiquid financial instruments and related disclosures. We encourage the IAASB to consider, in particular, the application of the audit standards with respect to:

- obtaining appropriate valuation expertise for the audit; and
- challenging fair value estimates produced by their audit clients.

78. Within the EU, various audit oversight bodies will be reviewing the audit work on valuations of illiquid instruments and their findings are likely to be useful for the IAASB task force.

Issues to be addressed:

⇨ *The IAASB to pursue its efforts regarding the consideration of lessons learned during the market turmoil through consultation with audit firms, audit oversight bodies and relevant regulators.*

Based on these consultations, the IAASB should enhance its audit guidance on implementing the revised ISA 540, where necessary, on valuations of financial instruments derived from models, and the related disclosures. Such enhancements would moreover assist in improving audit quality, which is critical to market confidence

CEBS could contribute to these consultations by holding a round-table with audit firms which covers the issues that have arisen, and the lessons to be learned, in the audit of valuation and disclosure of financial instruments where there are illiquid markets.

⇨ *Audit firms to work with their banking clients to ensure that their disclosures around these valuations are clear and meaningful on the methodology used for valuation of financial instruments and the uncertainty around those valuations.*

Appendix 1 - Issues to be considered by institutions and accounting and auditing standard setters in the context of the valuation of complex and illiquid financial instruments (with mapping to the FSF recommendations)

<table>
<tr><td colspan="2"><u>A. Challenges for the valuation of complex or illiquid financial instruments</u></td></tr>
<tr><td>FSF recommendations on valuation:

International standard setters should enhance accounting […] guidance for valuations. Firms' valuation processes and related supervisory guidance should be enhanced…</td><td>CEBS issues to be addressed</td></tr>
<tr><td>III.6 The IASB will enhance its guidance on valuing financial instruments when markets are no longer active. To this end, it will set up an expert advisory panel in 2008.</td><td>- The IASB to clarify the circumstances and criteria under which institutions should resort to modelling techniques and to provide further guidance on what can be considered to be active markets and what constitute observable inputs.
- The IASB to issue guidance to improve the consistency of the classification of fair values between the different hierarchy levels across institutions. In particular the guidance should clarify under which conditions:
o valuations that rely solely on primary market transactions for similar instruments can be used in the context of the classification of fair values in the hierarchy; and
o consensus pricing services (and quotations from brokers when not supported by actual trades) can be used as input to the fair valuation process and for purposes of classification into the fair value hierarchy.
- The IASB to clarify the list of factors that should be considered as input to valuation techniques in the application guidance to IAS 39 (AG82). Factors needing further consideration include counterparty risk, liquidity risk and model risk. The IASB should in this context also clarify the approach to unit of account in IAS 39.
- The IASB to clarify whether it is possible to classify exposures intended for securitisation or syndication elsewhere than into the trading category when securitisation or syndication does not occur.
- In the same way it should be clarified whether it is possible to reclassify loan positions from the loans and receivables category to the AFS category and vice versa.
- The IASB to examine possible changes to the impairment rules for available for sale assets. .</td></tr>
</table>

	- *The IASB to clarify the accounting provisions with regard to the treatment of Day 1 profits and losses to ensure consistency in this respect.* - *The IASB to clarify the accounting provisions to ensure consistency with regard to the determination of the effect of own credit risk and to enhance disclosures on own credit risk for liabilities held for trading.*
III.7 Financial institutions should establish rigorous valuation processes[…] in 2008. To this end, they should: - Establish rigorous and timely processes to apply critical expert judgment and discipline in how they value holdings of complex or illiquid instruments (avoiding undue reliance on ratings and consensus pricing services); - Maintain sound governance and control practices associated with valuation processes, including those that deal with hard-to-observe inputs to valuation models, model validations, price verification and related audit programs;…	- *Institutions to devote sufficient resources, both in terms of quality and quantity, to model approval and review, independent price verification and stress testing, as well as to internal control units. Consistent and rigorous valuation practices should be applied throughout the banking group.* - *On a regular basis, institutions to assess the need to develop back-up valuation models for complex and potentially illiquid instruments.* - *Institutions to enhance their risk management practices, notably as regards the incorporation of all appropriate risk factors in valuation practices.* - *Institutions to enhance their policies and procedures as regards the initial classification of financial instruments into an accounting category, being mindful of the strict reclassification rules that exist in IAS 39. Notably, accounting classification should not be used with the view to achieving a particular capital treatment if this is disconnected from the business intent of the institution.* - *Institutions to apply the same valuation processes and diligence when valuing financial instruments irrespective of the accounting categories that they have been allocated to or whether the fair values are purely used for disclosure.* - *Institutions to ensure rigorous implementation of the impairment rules for instruments that are classified as available for sale and to ensure that the deterioration of assets' credit quality is reflected on a timely basis in institutions' financial statements and regulatory capital.* - *Institutions to create awareness in the market that in the event of an improvement in market conditions previously recorded gains stemming from financial liabilities designated at fair value attributable to changes in institutions' own credit risk will be absorbed by corresponding losses.* - *Institutions to apply sound criteria for investment and business decisions and to diligently analyse the related underlying risks and characteristics of a transaction prior to engaging in it. In the absence of appropriate information that would complicate the valuation of the position in times of stress, it is expected that institutions will refrain from engaging in these*

	transactions. - *The EU industry associations to continue their efforts to ensure that investors obtain all relevant information with respect to complex financial instruments (especially as regards structured products and securitisation activities).* - *Institutions to pay due attention to both net and gross exposures in managing their risks and to adequately take into account correlation and concentration risks when 'hedging' exposures.*
III.8 The BCBS will issue for consultation guidance to enhance the supervisory assessment of banks' valuation processes and reinforce sound practices in 2008.	
	- *Directive 2006/48/CE to be amended to ensure that the 'prudent valuation methods', 'valuation adjustments and reserves' and 'standards for less liquid positions' sections of Directive 2006/49/CE, Annex VII, part B apply to all positions, whether in the regulatory trading book or in the banking book.*
B. Transparency on valuation practices and methodologies as well as related uncertainty	
FSF recommendations on disclosures	
... *III.3 The BCBS will issue by 2009 further guidance to strengthen disclosure requirements under Pillar 3 of Basel II for: ...* o *valuations, including the methodologies and uncertainties related to those valuations.*	

Valuation *International standard setters should enhance [...] disclosure [...] guidance for valuations.* *...* *III.5 The IASB will strengthen its standards to achieve better disclosures about valuations, methodologies and the uncertainty associated with valuations.*	- *The IASB to review IFRS 7 in the light of the current developments and to consider in particular the incorporation of quantitative disclosures on fair values determined under each of the different levels of the fair value hierarchy, as well as quantitative disclosures on stress scenarios reflecting the sensitivity and uncertainty of valuations.*

III.7 Financial institutions should [...] make robust valuation disclosures. 2008. To this end, they should: [...]
 	
- *Enhance the quality of their disclosures about valuations, valuation methodologies, price verification processes and the uncertainty associated with valuations*
 	
...
	- *Institutions to enhance their disclosures on fair values and on valuation techniques by providing information on:*
	o *financial instruments to which fair values are applied;*
	o *treatment of Day 1 profits (including quantitative information);*
	o *use of the fair value option (including its conditions for use) and related amounts (with appropriate breakdowns);*
	o *the fair value hierarchy, including a breakdown of all exposures measured at fair value by different levels of the fair value hierarchy, with a breakdown between cash and derivative instruments and disclosures on migrations between the different levels;*
	o *a description of modelling techniques and of the instruments to which they are applied, in particular:*
	  o *valuation processes, including the assumptions and input factors institutions use in modelling techniques;*
	  o *the type of adjustments applied to reflect model risk and other valuation uncertainties;*
	o *sensitivity of fair values; and*
	o *stress scenarios.*

<u>C) Auditing of fair value estimates</u>:	
FSF recommendation on auditing *III.9 The International Auditing and Assurance Standards Board (IAASB), major national audit standard setters and relevant regulators should consider the lessons learned during the market turmoil and, where necessary, enhance the guidance for audits of valuations of complex or illiquid financial products and related disclosures*	- *The IAASB to pursue its efforts regarding the consideration of lessons learned during the market turmoil through consultation with audit firms, audit oversight bodies and relevant regulators.* *Based on these consultations, the IAASB should enhance its audit guidance on implementing the revised ISA 540, where necessary, on valuations of financial instruments derived from models, and the related disclosures. Such enhancements would moreover assist in improving audit quality, which is critical to market confidence.* *CEBS could contribute to these consultations by holding a round-table with audit firms which covers the issues that have arisen, and the lessons to be learned, in the audit of valuation and disclosure of financial instruments where there are illiquid markets.* - *Audit firms to work with their banking clients to ensure that their disclosures around these valuations are clear and meaningful on the methodology used for valuation of financial instruments and the uncertainty around those valuations.*