

COMMISSION SERVICES STAFF WORKING DOCUMENT

POSSIBLE CHANGES TO THE CRD

The present working document seeks the views of stakeholders on possible changes to the CRD which could complement the Commission's proposal of October 1, 2008¹ in addressing lessons of the current crisis. Such possible changes would follow the announcement in the Commission's communication of March 4² and build on the consultative papers released by the Basel Committee on January 16, 2009. The present working document therefore underscores the Commission services desire for further developing European credit institutions' and investment firms' rules in line with international developments. At the same time, given the specific nature of the European scope of application of these rules, the Commission services place particular weight on receiving feedback from the full range of European stakeholders.

The Commission services however would like to make clear that that any such changes are without prejudice to further measures in banking regulation that the Commission services are currently considering in order to strengthen the prudential framework.

The possible changes in this document, which are in line with the consultative papers released by the Basel Committee, suggest:

- a. strengthening capital requirements in the trading book
- b. raising capital charges for certain securitisation exposures
- c. upgrading risk management and disclosure standards for securitisation positions

(a.) The changes related to the trading book follow up on earlier requests for public feedback by both the Basel Committee and the Commission services. Most notably from a European perspective, these changes now concern not only institutions that use internal models for specific risk, but all credit institutions and investment firms ("institutions") that calculate capital requirements for market risks.

In particular, all capital requirements for specific risk for securitisation positions in the trading book would be based on the capital requirements on the banking book. In this context, the Basel Committee has noted in its consultative paper that an alternative to singling out securitisation positions would be to calculate specific risk capital requirements *for all* net positions in the trading book as 8% of the relevant banking book risk weight. The Commission services also seek views specifically on this alternative approach which has however not been incorporated in the present Commission services working document.

Stakeholders are invited to discuss and provide any available evidence about the impact of the suggested changes a) on their capital requirements given the present structure of their trading books and b) on the future structure of their trading book business.

<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/1433&format=HTML&aged=0&language=EN&guiLanguage=fr>

² COM(2009) 114, cf. Annex I, page 5

(b.) As far as higher capital charges for certain securitisation positions in the banking book are concerned, the changes envisaged by the Basel Committee related to liquidity facilities have already been pre-empted by a draft Commission Directive which is in the process of adoption under the comitology procedure. Therefore, the main novelty of the present working document is higher capital charges for "re-securitisation exposures" such as CDOs of ABS or CDO². **The Commission services would like to stress that these higher capital charges have to be seen in the context of the stringent due diligence requirements on investors envisaged in the Commission proposal to change the CRD dated October 1, 2008. Moreover, the Commission services view is that in the case of re-securitisation exposures the complexity can be such that institutions will never be able to completely meet the appropriate due diligence requirements. Therefore, such high complexity re-securitisation exposures should, rather than be risk-weighted, be completely deducted from capital. Stakeholders views are sought if all re-securitisation positions should be deducted from capital or if it is possible to set a rule identifying those where due diligence is possible and risk weights in line with those of the Basel consultation paper could be applied.** Stakeholders are furthermore invited to discuss and provide any available evidence about the impact of the potential changes on their capital requirements given their present investment in re-securitisations. In addition, stakeholders are invited to discuss their intentions to invest in re-securitisation products in the future.

(c.) Also in the area of risk management and disclosure standards for securitisation positions, the Commission's proposal of October 1, 2008 already entailed important enhancements regarding how institutions should manage the risks of securitisation positions. Consequently, the Commission services would envisage no additional requirements on risk management to be added to European legislation at this stage. This is without prejudice to supervisory guidance that may take onboard in the future further elements that are contained in the Basel Committee's consultation paper. Stakeholders views are in particular sought if additional elements from the Basel document should be included in the directive text. By contrast, the new requirements on disclosures that the Basel Committee is consulting on have also been included in the present working paper. In particular views from the users of these disclosures are sought as to the usefulness of these additional requirements.

Stakeholders are requested to provide feedback by April 29, 2009 to the following email address: markt-h1@ec.europa.eu.

Comments and observation on any aspect of this consultation document are welcome. Comments will be posted on the following website unless otherwise requested: http://ec.europa.eu/internal_market/credit_institution/regcapital/index_en.htm

(DRAFTING NOTE: UNDERLINED TEXT IS NEW. STRIKETHROUGH INDICATES DELETION OF THE PRESENT DIRECTIVE TEXT)

Directive 2006/48/EC

Article 4

New definitions inserted after (40)

(40a) 're-securitisation' means a securitisation where one or more of the underlying exposures meet the definition of a securitisation position.

(40b) 're-securitisation position' means an exposure to a re-securitisation.

Article 57

Changes to letter (r):

(r) the exposure amount of securitisation positions which receive a risk weight of 1 250 % under Annex XI, Part 4, calculated in the manner there specified and the net positions in instruments to which deduction treatment applies according to Annex I point 16a of Directive 2006/49/EC.

Article 64

New paragraph 5

5. Credit institutions shall apply the requirements of Part B of Annex VII of Directive 2006/49/EC to all their assets recorded at fair value when calculating the amount of own funds and shall not include in the amount of own funds any amounts necessary as adjustments under these requirements.

Annex IX

Part 3

new letter c) in point 1:

c) The credit assessment shall not be based or partly based on unfunded support provided by the credit institution itself.

Part 4

(...)

6. Subject to point 8, the risk-weighted exposure amount of a rated securitisation or re-securitisation position shall be calculated by applying to the exposure value the risk weight associated with the credit quality step with which the credit assessment has been determined to be associated by the competent authorities in accordance with Article 98 as laid down in Tables 1 ~~and 2~~.

Table 1

Credit Step	Quality	1	2	3	4 (only for credit assessments other than short-term credit assessments)	all other credit quality steps
Securitisation positions		20%	50%	100%	350%	1250%
Re-securitisation positions		[40%]	[100%]	[225%]	[650%]	[1250%]

[The risk weights in square brackets are, for illustrative purposes, those foreseen by the Basel Committee for re-securitisation positions. However, the Commission services view is that in the case of re-securitisation exposures the complexity can be such that institutions will never be able to completely meet the appropriate due diligence requirements. Therefore, such high complexity re-securitisation exposures should, rather than be risk-weighted, be completely deducted from capital. Stakeholders views are sought if all re-securitisation positions should be deducted from capital or if it is possible to set a rule identifying those where due diligence is possible and risk weights in line with those of the Basel consultation paper could be applied.]

(...)

46. Under the Ratings Based Method, the risk-weighted exposure amount of a rated securitisation position or re-securitisation shall be calculated by applying to the exposure value the risk weight associated with the credit quality step with which the credit assessment has been determined to be associated by the competent authorities in accordance with Article 98, as set out in the Tables 4 ~~and 5~~, multiplied by 1,06.

(...)

47. ~~Subject to points 48 and 49, the risk weights in column A of each table shall be applied where the position is in the most senior tranche of a securitisation. The weightings in column C of table 4 shall be applied where the securitisation position is not a re-securitisation position and where the effective number of exposures securitised is less than six. For the remainder of the securitisation positions that are not re-securitisation positions, the weightings in column B shall be applied unless the position is in the most senior tranche of a securitisation, in which case the weightings in column A shall be applied. For re-securitisation positions the weightings in column E shall be applied unless the re-securitisation position is in the most senior tranche of the re-securitisation and none of the underlying exposures were themselves re-securitisation exposures, in which case column D shall be applied. When determining whether a tranche is the most senior, it is not required to take into consideration amounts due under interest rate or currency derivative contracts, fees due, or other similar payments.~~

(...)

Table 4

Credit Quality Step		Securitisation Positions			Re-securitisation Positions	
Credit assessments other than short term	Short term credit assessments	A	B	C	D	E
1	1	7%	12%	20%	[20%]	[30%]
2		8%	15%	25%	[25%]	[40%]
3		10%	18%	35%	[35%]	[50%]
4	2	12%	20%		[40%]	[65%]
5		20%	35%		[60%]	[100%]
6		35%	50%		[100%]	[150%]
7	3	60%	75%		[150%]	[225%]
8		100%			[200%]	[350%]
9		250%			[300%]	[500%]
10		425%			[500%]	[650%]
11		650%			[750%]	[850%]
all other and unrated		1250%				

[The risk weights in square brackets are, for illustrative purposes, those foreseen by the Basel Committee for re-securitisation positions. However, the Commission

services view is that in the case of re-securitisation exposures the complexity can be such that institutions will never be able to completely meet the appropriate due diligence requirements. Therefore, such high complexity re-securitisation exposures should, rather than be risk-weighted, be completely deducted from capital. Stakeholders views are sought if all re-securitisation positions should be deducted from capital or if it is possible to set a rule identifying those where due diligence is possible and risk weights in line with those of the Basel consultation paper could be applied.]

(...)

Annex XII

Part 1

new point 0. to be included before the existing point 1.:

0. Without prejudice to other requirements in this directive, a credit institution shall disclose the information that is necessary for an educated reader to understand its risk profile.

(...)

Part 2

(...)

9. The credit institutions calculating their capital requirements in accordance with Article 75, points (b) and (c) shall disclose those requirements separately for each risk referred to in those provisions. In addition, the capital requirement for specific interest rate risk of securitisation positions shall be disclosed separately.

10. The following information shall be disclosed by each credit institution which calculates its capital requirements in accordance with Annex V to Directive 2006/49/EC:

(a) for each sub-portfolio covered:

(i) the characteristics of the models used;

(i bis) For the incremental risk capital charge the methodologies used and the risks measured through the use of an internal model including a description of the approach used by the credit institution to determine liquidity horizons, the methodologies used to achieve a capital assessment that is consistent with the required soundness standard and the approaches used in the validation of the model;

(ii) a description of stress testing applied to the sub-portfolio;

(iii) a description of the approaches used for back-testing and validating the accuracy and consistency of the internal models and modelling processes;

(b) the scope of acceptance by the competent authority;

(c) a description of the extent and methodologies for compliance with the requirements set out in Annex VII, Part B to Directive 2006/49/EC;

(d) the highest, the lowest and the mean of:

(i) the daily value-at-risk measures over the reporting period and as per the period end;

(ii) the stressed value-at-risk measures over the reporting period and as per the period end; and

(iii) the incremental risk capital charge over the reporting period and as per the period-end; and

(e) the amount of capital for incremental risk, together with the weighted average liquidity horizon for each sub-portfolio covered,

(f) a comparison of the daily end-of-day value-at-risk measures to the one-day changes of the portfolio's value by the end of the subsequent business day together with an analysis of any important overshootings during the reporting period.;

(...)

14. The credit institutions calculating risk weighted exposure amounts in accordance with Articles 94 to 101 shall disclose the following information:

(a) a description of the credit institution's objectives in relation to securitisation activity;

(aa) the nature of other risks including liquidity risk inherent in securitised assets;

(ab) the type of risks in terms of seniority of underlying securitisation positions and in terms of assets underlying these latter securitisation positions assumed and retained with re-securitisation activity,

(b) the different roles played by the credit institution in the securitisation process;

(c) an indication of the extent of the credit institution's involvement in each of them;

(ca) a description of the processes in place to monitor changes in the credit and market risk of securitisation exposures including, how the behaviour of the underlying assets impacts securitisation exposures and a description of how those processes differ for re-securitisation exposures;

(cb) a description of the credit institution's policy governing the use of hedging and unfunded protection to mitigate the risks of retained securitisation and resecuritisation exposures, including identification of material hedge counterparties by relevant type of risk exposure;

(d) the approaches to calculating risk weighted exposure amounts that the credit institution follows for its securitisation activities including the types of securitisation exposures to which each approach applies;

(da) the types of SSPEs that the credit institution, as sponsor, uses to securitise third-party exposures including whether and in what form and to what extent the credit institution has exposure to these SSPEs, both on- or off-balance sheet;

(e) a summary of the credit institution's accounting policies for securitisation activities, including:

(i) whether the transactions are treated as sales or financings;

(ii) the recognition of gains on sales;

(iii) the methods and key assumptions and inputs for valuing securitisation positions ~~retained interests; and~~

(iv) the treatment of synthetic securitisations if this is not covered by other accounting policies;

(v) how assets awaiting securitisation are valued and whether they are recorded in the credit institutions non-trading book or the trading book; and

(vi) policies for recognising liabilities on the balance sheet for arrangements that could require the credit institution to provide financial support for securitised assets.

(f) the names of the ECAIs used for securitisations and the types of exposure for which each agency is used;

(g) where applicable, a description of the Internal Assessment Approach as set out in Annex IX, Part 4 including the structure of the internal assessment process and relation between internal assessment and external ratings, the use of internal assessment other than for IAA capital purposes, the control mechanisms for the internal assessment process including

discussion of independence, accountability, and internal assessment process review; the exposure types to which the internal assessment process is applied and the stress factors used for determining credit enhancement levels, by exposure type.

(h) Credit institutions shall disclose the quantitative information for their trading book and non-trading book respectively that is set out in Table 1 below. Credit institutions shall disclose an explanation of significant changes to any of these quantitative disclosures since the last reporting period.

~~(g) the total outstanding amount of exposures securitised by the credit institution and subject to the securitisation framework (broken down into traditional and synthetic), by exposure type;~~

Table 1 (new)

non-trading book	trading book
<p>The total outstanding exposures securitised by the credit institution, broken down by exposure type, separately for:</p> <ul style="list-style-type: none"> • traditional and synthetic securitisations; and • securitisations for which the credit institution acts only as sponsor. 	<p>The total amount of outstanding exposures securitised by the credit institution, broken down by exposure type, separately for:</p> <ul style="list-style-type: none"> • traditional and synthetic securitisations; and • securitisations for which the credit institution acts only as sponsor.
<p>For exposures securitised by the credit institution:</p> <ul style="list-style-type: none"> • amount of impaired/past due assets securitised broken down by exposure type; and • losses recognised by the credit institution during the current period broken down by exposure type. 	<p>The total outstanding exposures securitised by the credit institution and subject to a capital requirement for market risk, broken down into traditional/synthetic and by exposure type.</p>
<p>Aggregate amount of:</p> <ul style="list-style-type: none"> • on-balance sheet securitisation exposures retained or purchased broken down by exposure type; and • off-balance sheet securitisation exposures broken down by exposure type. 	<p>Aggregate amount of:</p> <ul style="list-style-type: none"> • on-balance sheet securitisation exposures retained or purchased broken down by exposure type; and • off-balance sheet securitisation exposures broken down by exposure type.
<p>Aggregate amount of assets awaiting securitisation broken down by exposure type.</p>	<p>Aggregate amount of assets awaiting securitisation broken down by exposure type.</p>
<p>Aggregate amount of securitisation exposures retained or purchased and the associated capital requirements, for these exposures broken down between securitisation and re-securitisation exposures and further broken down into a meaningful number of risk weight bands for each</p>	<p>Aggregate amount of securitisation exposures retained or purchased separately for:</p> <ul style="list-style-type: none"> • the amount subject to the market risk approach; and • the amount subject to the securitisation

regulatory capital approach used.	framework.
	The capital requirements for these securitisation exposures (re-securitisation or securitisation), broken down into a meaningful number of risk weight bands, for each regulatory capital approach used.
For securitisations subject to the early amortisation treatment, the following items by underlying asset exposure type for securitised facilities: <ul style="list-style-type: none"> • the aggregate drawn exposures attributed to the seller's and investors' interests; • the aggregate capital requirements incurred by the credit institution against its retained (i.e. the seller's) shares of the drawn balances and undrawn lines; and • the aggregate capital requirements incurred by the credit institution against the investor's shares of drawn balances and undrawn lines. 	For securitisations subject to the early amortisation treatment, the following items by exposure type for securitised facilities: <ul style="list-style-type: none"> • the aggregate drawn exposures attributed to the seller's and investors' interests; • the aggregate capital requirements incurred by the credit institution against its retained (i.e. the seller's) shares of the drawn balances and undrawn lines; and • the aggregate capital requirements incurred by the credit institution against the investor's shares of drawn balances and undrawn lines.
Exposures that have been deducted entirely from Tier 1 capital, credit enhancing I/Os deducted from Total Capital, and other exposures deducted from total capital shall be disclosed separately by exposure type of underlying asset.	The amount of securitisation exposures that are deducted entirely from Tier 1 capital, credit enhancing I/Os deducted from Total Capital, and other exposures deducted from total capital should be disclosed separately by exposure type.
Aggregate amount of re-securitisation exposures retained or purchased broken down according to: <ul style="list-style-type: none"> • the exposure before and after hedging/insurance; and • the exposure to financial guarantors broken down according to guarantor credit worthiness categories or guarantor name. 	Aggregate amount of re-securitisation exposures retained or purchased broken down according to: <ul style="list-style-type: none"> • the exposure before and after hedging/insurance; and • the exposure to financial guarantors broken down according to guarantor credit worthiness categories or guarantor name.
Summary of current year's securitisation activity, including the amount of exposures securitised (by exposure type), and recognised gain or loss on sale by asset type	Summary of current year's securitisation activity, including the amount of exposures securitised (by exposure type), and recognised gain or loss on sale by asset type.

~~(h) for exposures securitised by the credit institution and subject to the securitisation framework, a breakdown by exposure type of the amount of impaired and past due exposures securitised, and the losses recognised by the credit institution during the period;~~

- ~~(i) the aggregate amount of securitisation positions retained or purchased, broken down by exposure type;~~
- ~~(j) the aggregate amount of securitisation positions retained or purchased, broken down into a meaningful number of risk weight bands. Positions that have been risk weighted at 1-250 % or deducted shall be disclosed separately;~~
- ~~(k) the aggregate outstanding amount of securitised revolving exposures segregated by the originator's interest and the investors' interest; and~~
- ~~(l) a summary of the securitisation activity in the period, including the amount of exposures securitised (by exposure type), and recognised gain or loss on sale by exposure type.~~

Directive 2006/49/EC

Article 3

New letter (t) in Paragraph 1:

(t) 'securitisation position' and 're-securitisation position' mean securitisation position and re-securitisation position as defined in Directive 2006/48/EC.

ANNEX I

CALCULATING CAPITAL REQUIREMENTS FOR POSITION RISK

(...)

Traded Debt Instruments

(....)

Specific risk

14. The institution shall assign its net positions in the trading book in instruments that are not securitisation positions as calculated in accordance with point 1 to the appropriate categories in Table 1 on the basis of their issuer/obligor, external or internal credit assessment, and residual maturity, and then multiply them by the weightings shown in that table. It shall sum its weighted positions resulting from the application of this point and of point 16a (regardless of whether they are long or short) in order to calculate its capital requirement against specific risk.

Table 1 (unchanged)

For institutions which apply the rules for the risk weighting of exposures under Articles 84 to 89 of Directive 2006/48/EC, to qualify for a credit quality step the obligor of the exposure shall have an internal rating with a PD equivalent to or lower than that associated with the appropriate credit quality step under the rules for the risk weighting of exposures to corporates under Articles 78 to 83 of that Directive.

Instruments issued by a non-qualifying issuer shall receive a specific risk capital charge of 8 % or 12 % according to Table 1. Competent authorities may require institutions to apply a higher specific risk charge to such instruments and/or to disallow offsetting for the purposes of defining the extent of general market risk between such instruments and any other debt instruments.

~~Securitisation exposures that would be subject to a deduction treatment as set out in Article 66(2) of Directive 2006/48/EC, or risk weighted at 1,250 % as set out in Part 4 of Annex IX to that Directive, shall be subject to a capital charge that is no less than that set out under those treatments. Unrated liquidity facilities shall be subject to a capital charge that is no less than that set out in Part 4 of Annex IX to Directive 2006/48/EC.~~

(...)

16a. The institution shall multiply its net positions in the trading book in instruments that are securitisation positions as calculated in accordance with point 1 with weightings as follows:

a) institutions that do not use an internal model for calculating capital requirements for specific risk associated with traded debt positions shall use as applicable weighting 8%

of any risk weight lower than 1250% that may be applied in the non-trading book to the same securitisation position under the standardised approach as set out in Annex IX Part 4 of Directive 2006/48/EC;

b) all other institutions shall use as applicable weighting

i) when securitisation positions are concerned that would be subject to the Standardised Approach for credit risk in the same institution's non-trading book 8% of any risk weight lower than 1250% that may be applied in the non-trading book to the same securitisation position under the Standardised Approach as set out in Annex IX Part 4 of Directive 2006/48/EC;

ii) when securitisation positions are concerned that would be subject to the Internal Ratings Based Approach in the same institution's non-trading book 8% of any risk weight lower than 1250% that may be applied in the non-trading book to the same securitisation position under either the Standardised Approach or Internal Ratings Based Approach as set out in Annex IX Part 4 of Directive 2006/48/EC. The Supervisory Formula Method may only be used with supervisory approval by institutions other than an originator institution that may apply it for the same securitisation position in its non-trading book. Where relevant, inputs to the Supervisory Formula Method shall be determined in accordance with Articles 84 to 89 of directive 2006/48/EC or alternatively in accordance with Annex V, point 5a;

Net positions in instruments that are securitisation positions as calculated in accordance with point 1 and to which no weighting is applied according to this paragraph shall be deducted from capital.

(...)

EQUITIES

(...)

Specific Risk

34. The institution shall sum all its net long positions and all its net short positions in accordance with point 1. It shall multiply its overall gross position by ~~4%~~ **8%** in order to calculate its capital requirement against specific risk.

~~35. By derogation from point 34, the competent authorities may allow the capital requirement against specific risk to be 2 % rather than 4 % for those portfolios of equities that an institution holds which meet the following conditions:~~

~~(a) the equities shall not be those of issuers which have issued only traded debt instruments that currently attract an 8 % or 12 % requirement in Table 1 to point 14 or that attract a lower requirement only because they are guaranteed or secured;~~

~~(b) the equities must be adjudged highly liquid by the competent authorities according to objective criteria; and~~

~~(c) no individual position shall comprise more than 5 % of the value of the institution's whole equity portfolio.~~

~~For the purpose of point (c), the competent authorities may authorise individual positions of up to 10 % provided that the total of such positions does not exceed 50 % of the portfolio.~~

(...)

ANNEX V

USE OF INTERNAL MODELS TO CALCULATE CAPITAL REQUIREMENTS

1. The competent authorities may, subject to the conditions laid down in this Annex, allow institutions to calculate their capital requirements for position risk, foreign-exchange risk and/or commodities risk using their own internal risk-management models instead of or in combination with the methods described in Annexes I, III and IV. Explicit recognition by the competent authorities of the use of models for supervisory capital purposes shall be required in each case.

2. Recognition shall only be given if the competent authority is satisfied that the institution's risk-management system is conceptually sound and implemented with integrity and that, in particular, the following qualitative standards are met:

(a) the internal risk-measurement model is closely integrated into the daily risk-management process of the institution and serves as the basis for reporting risk exposures to senior management of the institution;

(b) the institution has a risk control unit that is independent from business trading units and reports directly to senior management. The unit must be responsible for designing and implementing the institution's risk-management system. It shall produce and analyse daily reports on the output of the risk-measurement model and on the appropriate measures to be taken in terms of trading limits. The unit shall also conduct the initial and on-going validation of the internal model;

(c) the institution's board of directors and senior management are actively involved in the risk-control process and the daily reports produced by the risk-control unit are reviewed by a level of management with sufficient authority to enforce both reductions of positions taken by individual traders as well as in the institution's overall risk exposure;

(d) the institution has sufficient numbers of staff skilled in the use of sophisticated models in the trading, risk-control, audit and back-office areas;

(e) the institution has established procedures for monitoring and ensuring compliance with a documented set of internal policies and controls concerning the overall operation of the risk-measurement system;

(f) the institution's model has a proven track record of reasonable accuracy in measuring risks;

(g) the institution frequently conducts a rigorous programme of stress testing and the results of these tests are reviewed by senior management and reflected in the policies and limits it sets. This process shall particularly address illiquidity of markets in stressed market conditions, concentration risk, one way markets, event and jump-to-default risks, non-linearity of products, deep out-of-the-money positions, positions subject to the gapping of prices and other risks that may not be captured appropriately in the internal models. The shocks applied shall reflect the nature of the portfolios and the time it could take to hedge out or manage risks under severe market conditions; and

(h) the institution must conduct, as part of its regular internal auditing process, an independent review of its risk-measurement system.

The review referred to in point (h) of the first paragraph shall include both the activities of the business trading units and of the independent risk-control unit. At least once a year, the institution must conduct a review of its overall risk-management process.

The review shall consider the following:

- (a) the adequacy of the documentation of the risk-management system and process and the organisation of the risk-control unit;
- (b) the integration of market risk measures into daily risk management and the integrity of the management information system;
- (c) the process the institution employs for approving risk-pricing models and valuation systems that are used by front and back-office personnel;
- (d) the scope of market risks captured by the risk-measurement model and the validation of any significant changes in the risk-measurement process;
- (e) the accuracy and completeness of position data, the accuracy and appropriateness of volatility and correlation assumptions, and the accuracy of valuation and risk sensitivity calculations;
- (f) the verification process the institution employs to evaluate the consistency, timeliness and reliability of data sources used to run internal models, including the independence of such data sources; and
- (g) the verification process the institution uses to evaluate back-testing that is conducted to assess the models' accuracy.

3. Institutions shall have processes in place to ensure that their internal models have been adequately validated by suitably qualified parties independent of the development process to ensure that they are conceptually sound and adequately capture all material risks. The validation shall be conducted when the internal model is initially developed and when any significant changes are made to the internal model. The validation shall also be conducted on a periodic basis but especially where there have been any significant structural changes in the market or changes to the composition of the portfolio which might lead to the internal model no longer being adequate. As techniques and best practices evolve, institutions shall avail themselves of these advances. Internal model validation shall not be limited to back-testing, but shall, at a minimum, also include the following:

- (a) tests to demonstrate that any assumptions made within the internal model are appropriate and do not underestimate or overestimate the risk;
- (b) in addition to the regulatory back-testing programmes, institutions shall carry out their own internal model validation tests in relation to the risks and structures of their portfolios; and
- (c) the use of hypothetical portfolios to ensure that the internal model is able to account for particular structural features that may arise, for example material basis risks and concentration risk.

4. The institution shall monitor the accuracy and performance of its model by conducting a back-testing programme. The back-testing has to provide for each business day a comparison of the one-day value-at-risk measure generated by the institution's model for the portfolio's end-of-day positions to the one-day change of the portfolio's value by the end of the subsequent business day.

Competent authorities shall examine the institution's capability to perform back-testing on both actual and hypothetical changes in the portfolio's value. Back-testing on hypothetical changes in the portfolio's value is based on a comparison between the portfolio's end-of-day value and, assuming unchanged positions, its value at the end of the subsequent day. Competent authorities shall require institutions to take appropriate measures to improve their back-testing programme if deemed deficient. At a minimum, competent authorities shall may require institutions to perform back-testing on either hypothetical (using changes in portfolio value that would occur were end-of-day positions to remain unchanged), or actual trading (excluding fees, commissions, and net interest income) outcomes, or both.

5. For the purpose of calculating capital requirements for specific risk associated with traded debt and equity positions, the competent authorities may recognise the use of an institution's internal model if, in addition to compliance with the conditions in the remainder of this Annex, the internal model meets the following conditions:

- (a) it explains the historical price variation in the portfolio;
- (b) it captures concentration in terms of magnitude and changes of composition of the portfolio;
- (c) it is robust to an adverse environment;
- (d) it is validated through back-testing aimed at assessing whether specific risk is being accurately captured. If competent authorities allow this back-testing to be performed on the basis of relevant sub-portfolios, these must be chosen in a consistent manner; and
- (e) it captures name-related basis risk, that is institutions shall demonstrate that the internal model is sensitive to material idiosyncratic differences between similar but not identical positions; ~~and~~
- ~~(f) it captures event risk.~~

~~The institution shall also meet the following conditions:~~

~~— where an institution is subject to event risk that is not reflected in its value at risk measure, because it is beyond the 10 day holding period and 99 percent confidence interval (low probability and high severity events), the institution shall ensure that the impact of such events is factored in to its internal capital assessment; and~~

~~— The institution's internal model shall conservatively assess the risk arising from less liquid positions and positions with limited price transparency under realistic market scenarios. In addition, the internal model shall meet minimum data standards. Proxies shall be appropriately conservative and may be used only where available data is insufficient or is not reflective of the true volatility of a position or portfolio.~~

The institution may choose to include or not to include in the calculation of its capital requirement for specific risk using an internal model positions for which it meets an additional capital requirement for position risks according to point 16a of Annex I.

Further, as techniques and best practices evolve, institutions shall avail themselves of these advances.

If the competent authority does not recognise that an institution meets the requirements of this point and the requirements of point 5a to capture the incremental default risks through an internally developed approach, the institution shall calculate specific risk capital requirements according to Annex I rather than this Annex the surcharge through

~~an approach consistent with either the approach set out in Articles 78 to 83 of Directive 2006/48/EC or the approach set out in Articles 84 to 89 of that Directive.~~

5a. In addition, the institution shall have an approach in place to capture, in the calculation of its capital requirements, the default and migration risks of in its trading book positions that ~~is~~are incremental to the ~~default~~ risks captured by the value-at-risk measure as specified in ~~the previous requirements of this point 5.~~

~~To avoid double counting, an institution may, when calculating its incremental default risk charge, take into account the extent to which default risk has already been incorporated into the value at risk measure, especially for risk positions that could and would be closed within 10 days in the event of adverse market conditions or other indications of deterioration in the credit environment. Where an institution captures its incremental default risk through a surcharge, it shall have in place methodologies for validating the measure. The institution shall demonstrate that its approach meets soundness standards comparable to the approach set out in Articles 84 to 89 of Directive 2006/48/EC, under the assumption of a constant level of risk, and adjusted where appropriate to reflect the impact of liquidity, concentrations, hedging and optionality.~~

Scope

The approach to capture the incremental default and migration risks shall cover all positions subject to a capital charge for specific interest rate risk but shall not cover those subject to the specific treatment of point 16a of Annex I. Subject to supervisory approval, the institution may choose to include equity positions that are part of capital structure arbitrage strategies and risk managed accordingly.

Parameters

The approach to capture the incremental risks must measure losses due to default and internal or external ratings migration at the 99.9 percent confidence interval over a capital horizon of one year.

Correlation assumptions shall be supported by analysis of objective data in a conceptually sound framework. The approach to capture the incremental risks shall appropriately reflect issuer concentrations. Concentrations that can arise within and across product classes under stressed conditions shall also be reflected.

The approach shall be based on the assumption of a constant level of risk over the one-year capital horizon, implying that given individual trading book positions or sets of positions that have experienced default or migration over their liquidity horizon are re-balanced at the end of their liquidity horizon to attain the initial level of risk. Alternatively, an institution may elect to use a one-year constant position assumption.

The liquidity horizons shall be set according to the time required to sell the position or to hedge all material relevant price risks in a stressed market, having particular regard to the size of the position. Liquidity horizons shall reflect actual practice and experience during periods of both systematic and idiosyncratic stresses. The liquidity horizon shall be measured under conservative assumptions and shall be sufficiently long that the act of selling or hedging, in itself, would not materially affect the price at which the selling or hedging would be executed.

The determination of the appropriate liquidity horizon for a position or set of positions is subject to a floor of three months.

The determination of the appropriate liquidity horizon for a position or set of positions may take into account an institution's internal policies relating to valuation adjustments/reserves and the management of stale positions. When an institution determines liquidity horizons for sets of positions rather than for individual positions, the criteria for defining sets of positions shall be defined in a way that meaningfully reflects differences in liquidity. The liquidity horizons shall be greater for positions that are concentrated, reflecting the longer period needed to liquidate such positions. The liquidity horizon for a securitisation warehouse shall reflect the time to build, sell and securitise the assets, or to hedge the material risk factors, under stressed market conditions.

Hedges can be incorporated into an institution's approach to capture the incremental risks. Positions may however only be netted when long and short positions refer to the same financial instrument while other hedges may only be reflected by explicitly modelling gross long and short positions in the different instruments. Institutions shall reflect the impact of material risks that could occur during the interval between the hedge's maturity and the liquidity horizon as well as the potential for significant basis risks in hedging strategies by product, seniority in the capital structure, internal or external rating, maturity, vintage and other differences in the instruments. An institution shall reflect a hedge only to the extent that it can be maintained even as the obligor approaches a credit or other event.

For trading book positions that are hedged via dynamic hedging strategies, a rebalancing of the hedge within the liquidity horizon of the hedged position may be recognised provided that the institution (i) chooses to model rebalancing of the hedge consistently over the relevant set of trading book positions, (ii) demonstrates that the inclusion of rebalancing results in a better risk measurement, and (iii) demonstrates that the markets for the instruments serving as hedges are liquid enough to allow for this rebalancing even during periods of stress. Any residual risks resulting from dynamic hedging strategies must be reflected in the capital charge.

The approach to capture the incremental risks must reflect the nonlinear impact of options, structured credit derivatives and other positions with material nonlinear behaviour with respect to price changes. The institution shall also have due regard to the amount of model risk inherent in the valuation and estimation of price risks associated with such products.

The approach shall be based on objective data.

Validation

As part of the independent review of their risk measurement system and the validation of their internal models as required in this annex, institutions shall, with a view to the approach to capture incremental default and migration risks, in particular:

- validate that its modelling approach for correlations and price changes is appropriate for its portfolio, including the choice and weights of its systematic risk factors. An institution must document its modelling approach so that its correlation and other modelling assumptions are transparent to supervisors;
- perform a variety of stress tests, including sensitivity analysis and scenario analysis, to assess the approach's qualitative and quantitative reasonableness, particularly with regard to the treatment of concentrations. Such tests shall not be limited to the range of events experienced historically; and

- apply appropriate quantitative validation including relevant internal modelling benchmarks.

The approach to capture the incremental risks must be consistent with the institution's internal risk management methodologies for identifying, measuring, and managing trading risks.

Internal approaches based on different parameters

If the institution uses an approach for the measurement of incremental default and migration risks that does not comply with all requirements of this point but that is consistent with the institution's internal methodologies for identifying, measuring, and managing risks it shall be able to demonstrate that its approach results in a capital requirement that is at least as high as if it was based on an approach in full compliance with the requirements of this point.

Frequency of calculation

An institution shall calculate the approach to capture the incremental risks at least weekly.

~~With respect to cash or synthetic securitisation exposures that would be subject to a deduction treatment under the treatment set out in Article 66(2) of Directive 2006/48/EC, or risk-weighted at 1,250 % as set out in Part 4 of Annex IX to that Directive, these positions shall be subject to a capital charge that is no less than set forth under that treatment. Institutions that are dealers in these exposures may apply a different treatment where they can demonstrate to their competent authorities, in addition to trading intent that a liquid two-way market exists for the securitisation exposures or, in the case of synthetic securitisations that rely solely on credit derivatives, for the securitisation exposures themselves or all their constituent risk components. For the purposes of this section a two way market is deemed to exist where there are independent good faith offers to buy and sell so that a price reasonably related to the last sales price or current good faith competitive bid and offer quotations can be determined within one day and settled at such a price within a relatively short time conforming to trade custom. For an institution to apply a different treatment, it shall have sufficient market data to ensure that it fully captures the concentrated default risk of these exposures in its internal approach for measuring the incremental default risks in accordance with the standards set out above.~~

6. Institutions using internal models which are not recognised in accordance with point 4 shall be subject to a separate capital charge for specific risk as calculated according to Annex I.

7. For the purposes of points 910b(a) and 10b(b), the results of the institution's own calculation shall be scaled up by a multiplication factor (m_+ and m respectively) of at least 3.

8. ~~For the purposes of point 9~~10a(a), ~~t~~The multiplication factor shall be increased by a plus-factor of between 0 and 1 in accordance with Table 1 (m_+), depending on the number of overshootings for the most recent 250 business days as evidenced by the institution's back-testing of the value-at-risk measure as set out in point 10. Competent authorities shall require the institutions to calculate overshootings consistently on the basis of back-testing either on actual or on hypothetical changes in the portfolio's value. An overshooting is a one-day change in the portfolio's value that exceeds the related one-day value-at-risk measure generated by the institution's model. For the purpose of

determining the plus-factor the number of overshootings shall be assessed at least quarterly.

Table 1

Number of overshootings | Plus-factor |

Fewer than 5 | 0,00 |

5 | 0,40 |

6 | 0,50 |

7 | 0,65 |

8 | 0,75 |

9 | 0,85 |

10 or more | 1,00 |

The competent authorities may, in individual cases and owing to an exceptional situation, waive the requirement to increase the multiplication factor by the "plus-factor" in accordance with Table 1, if the institution has demonstrated to the satisfaction of the competent authorities that such an increase is unjustified and that the model is basically sound.

If numerous overshootings indicate that the model is not sufficiently accurate, the competent authorities shall revoke the model's recognition or impose appropriate measures to ensure that the model is improved promptly.

In order to allow competent authorities to monitor the appropriateness of the plus-factor on an ongoing basis, institutions shall notify promptly, and in any case no later than within five working days, the competent authorities of overshootings that result from their back-testing programme and that would according to the above table imply an increase of a plus-factor.

9. (omitted) ~~Each institution must meet a capital requirement expressed as the higher of:~~

~~(a) its previous day's value at risk measure according to the parameters specified in this Annex plus, where appropriate, the incremental default risk charge required under point 5a; or~~

~~(b) an average of the daily value at risk measures on each of the preceding 60 business days, multiplied by the factor mentioned in point 7, adjusted by the factor referred to in point 8 plus, where appropriate, the incremental default risk charge required under point 5a.~~

10. The calculation of the value-at-risk measure shall be subject to the following minimum standards:

(a) at least daily calculation of the value-at-risk measure;

(b) a 99th percentile, one-tailed confidence interval;

(c) a 10-day ~~equivalent~~ holding period;

(d) an effective historical observation period of at least one year except where a shorter observation period is justified by a significant upsurge in price volatility; and

(e) ~~three~~ monthly data set updates.

For purposes of letter (c), institutions may scale up measures derived for shorter holding periods only if they periodically justify the appropriateness of the scaling approach to the competent authority. Institutions must have processes in place that allow for data set updates more frequently than monthly.

10a. In addition, each institution must calculate a 'stressed value-at-risk' based on the 10-day, 99th percentile, one-tailed confidence interval value-at-risk measure of the current portfolio, with value-at-risk model inputs calibrated to historical data from a period of significant financial stress relevant to the firm's portfolio. This stressed value-at-risk should be calculated at least weekly.

10b. Each institution must meet, on a daily basis, a capital requirement expressed as the sum of:

(a) The higher of (1) its previous day's value-at-risk number measured according to point 10 (VaR_{t-1}); and (2) an average of the daily value-at-risk measures according to point 10 on each of the preceding sixty business days (VaR_{avg}), multiplied by the multiplication factor (m_+);

plus

(b) The higher of (1) its latest available stressed-value-at-risk number according to point 10a ($sVaR_{t-1}$); and (2) an average of the stressed value-at-risk numbers according to point 10a over the preceding sixty business days ($sVaR_{avg}$), multiplied the multiplication factor (m);

plus

(c) The sum of its weighted positions (regardless of whether they are long or short) resulting from the application of point 16a of Annex I;

plus

(d) The higher of the institution's most recent and the institution's 12 weeks average measure of incremental default and migration risk according to point 5a.

11. The competent authorities shall require that the model captures accurately all the material price risks of options or option-like positions and that any other risks not captured by the model are covered adequately by own funds.

12. The risk-measurement model shall capture a sufficient number of risk factors, depending on the level of activity of the institution in the respective markets ~~and in particular the following~~. Where a risk factor is incorporated in the institution's pricing model but not in the risk-measurement model, the institution must be able to justify this omission to the satisfaction of the competent authority. In addition, the risk-measurement model shall capture nonlinearities for options and other products as well as correlation risk and basis risk. Where proxies for risk factors are used they shall show a good track record for the actual position held. In addition, the following shall apply for individual risk types:

Interest rate risk

The risk-measurement system shall incorporate a set of risk factors corresponding to the interest rates in each currency in which the institution has interest rate sensitive on- or off-balance sheet positions. The institution shall model the yield curves using one of the generally accepted approaches. For material exposures to interest-rate risk in the major currencies and markets, the yield curve shall be divided into a minimum of six maturity

segments, to capture the variations of volatility of rates along the yield curve. The risk-measurement system must also capture the risk of less than perfectly correlated movements between different yield curves.

Foreign-exchange risk

The risk-measurement system shall incorporate risk factors corresponding to gold and to the individual foreign currencies in which the institution's positions are denominated.

For CIUs the actual foreign exchange positions of the CIU shall be taken into account. Institutions may rely on third party reporting of the foreign exchange position of the CIU, where the correctness of this report is adequately ensured. If an institution is not aware of the foreign exchange positions of a CIU, this position should be carved out and treated in accordance with the fourth paragraph of point 2.1 of Annex III.

Equity risk

The risk-measurement system shall use a separate risk factor at least for each of the equity markets in which the institution holds significant positions.

Commodity risk

The risk-measurement system shall use a separate risk factor at least for each commodity in which the institution holds significant positions. The risk-measurement system must also capture the risk of less than perfectly correlated movements between similar, but not identical, commodities and the exposure to changes in forward prices arising from maturity mismatches. It shall also take account of market characteristics, notably delivery dates and the scope provided to traders to close out positions.

13. The competent authorities may allow institutions to use empirical correlations within risk categories and across risk categories if they are satisfied that the institution's system for measuring correlations is sound and implemented with integrity.

ANNEX VII

TRADING

Part A remains unchanged.

Part B

Systems and Controls

1. Institutions shall establish and maintain systems and controls sufficient to provide prudent and reliable valuation estimates.

2. Systems and controls shall include at least the following elements:

(a) documented policies and procedures for the process of valuation. This includes clearly defined responsibilities of the various areas involved in the determination of the valuation, sources of market information and review of their appropriateness, guidelines for the use of unobservable inputs reflecting the institution's assumptions of what market participants would use in pricing the position, frequency of independent valuation, timing of closing prices, procedures for adjusting valuations, month end and ad-hoc verification procedures; and

(b) reporting lines for the department accountable for the valuation process that are clear and independent of the front office.

The reporting line shall ultimately be to a main board executive director.

Prudent Valuation Methods

3. Institutions shall mark their positions to market whenever possible. Marking to market is the at least daily valuation of positions at readily available close out prices that are sourced independently. Examples include exchange prices, screen prices, or quotes from several independent reputable brokers.

4. When marking to market, the more prudent side of bid/offer shall be used unless the institution is a significant market maker in the particular type of financial instrument or commodity in question and it can close out at mid market.

5. Where marking to market is not possible, institutions must conservatively mark to model their positions/portfolios before applying trading book capital treatment. Marking to model is defined as any valuation which has to be benchmarked, extrapolated or otherwise calculated from a market input.

6. The following requirements must be complied with when marking to model:

(a) senior management shall be aware of the elements of the trading book or of other fair-valued positions which are subject to mark to model and shall understand the materiality of the uncertainty this creates in the reporting of the risk/performance of the business;

(b) market inputs shall be sourced, where possible, in line with market prices, and the appropriateness of the market inputs of the particular position being valued and the parameters of the model shall be assessed on a frequent basis;

(c) where available, valuation methodologies which are accepted market practice for particular financial instruments or commodities shall be used;

(d) where the model is developed by the institution itself, it shall be based on appropriate assumptions, which have been assessed and challenged by suitably qualified parties independent of the development process;

(e) there shall be formal change control procedures in place and a secure copy of the model shall be held and periodically used to check valuations;

(f) risk management shall be aware of the weaknesses of the models used and how best to reflect those in the valuation output; and

(g) the model shall be subject to periodic review to determine the accuracy of its performance (e.g. assessing the continued appropriateness of assumptions, analysis of profit and loss versus risk factors, comparison of actual close out values to model outputs).

For the purposes of point (d), the model shall be developed or approved independently of the front office and shall be independently tested, including validation of the mathematics, assumptions and software implementation.

7. Independent price verification should be performed in addition to daily marking to market or marking to model. This is the process by which market prices or model inputs are regularly verified for accuracy and independence. While daily marking to market may be performed by dealers, verification of market prices and model inputs should be performed by a unit independent of the dealing room, at least monthly (or, depending on the nature of the market/trading activity, more frequently). Where independent

pricing sources are not available or pricing sources are more subjective, prudent measures such as valuation adjustments may be appropriate.

Valuation adjustments or reserves

8. Institutions shall establish and maintain procedures for considering valuation adjustments/reserves.

General standards

9. The competent authorities shall require the following valuation adjustments/reserves to be formally considered: unearned credit spreads, close-out costs, operational risks, early termination, investing and funding costs, future administrative costs and, where relevant, model risk.

Standards for less liquid positions

10. Less liquid positions could arise from both market events and institution-related situations e.g. concentrated positions and/or stale positions.

11. Institutions shall establish and maintain procedures for calculating an adjustment to the current valuation of less liquid positions. Such adjustments/reserves shall where necessary be in addition to any changes to the value of the position required for financial reporting purposes and should be designed to reflect the illiquidity of the position. Under these procedures, institutions shall consider several factors when determining whether a valuation adjustment/reserve is necessary for less liquid positions. These factors include the amount of time it would take to hedge out the position/risks within the position, the volatility and average of bid/offer spreads, the availability of market quotes (number and identity of market makers) and the volatility and average of trading volumes including trading volumes during periods of market stress, market concentrations, the aging of positions, the extent to which valuation relies on marking-to-model, and the impact of other model risks.

12. When using third party valuations or marking to model, institutions shall consider whether to apply a valuation adjustment. In addition, institutions shall consider the need for establishing reserves for less liquid positions and on an ongoing basis review their continued suitability.

13. When valuation adjustments/reserves give rise to material losses of the current financial year, these shall be deducted from an institution's original own funds according to point (k) of Article 57 of Directive 2006/48/EC

14. Other profits/losses originating from valuation adjustments/reserves shall be included in the calculation of "net trading book profits" mentioned in point (b) of Article 13(2) and be added to/deducted from the additional own funds eligible to cover market risk requirements according to such provisions.

15. Valuation adjustments/reserves which exceed those made under the accounting framework to which the institution is subject shall be treated in accordance with point 13 if they give rise to material losses, or point 14 otherwise.

Part C and Part D remain unchanged.