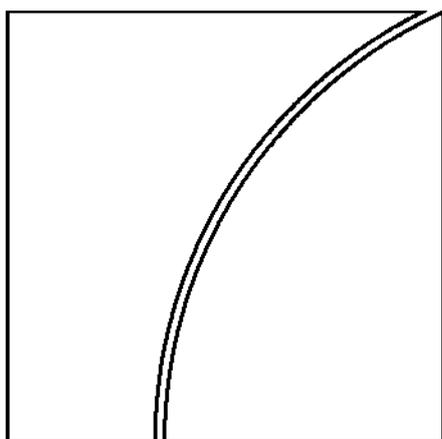
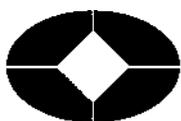


Basel Committee on Banking Supervision



Interpretive issues with respect to the revisions to the market risk framework

4 July 2011



BANK FOR INTERNATIONAL SETTLEMENTS

Copies of publications are available from:

Bank for International Settlements
Communications
CH-4002 Basel, Switzerland

E-mail: publications@bis.org

Fax: +41 61 280 9100 and +41 61 280 8100

This publication is available on the BIS website (www.bis.org).

© *Bank for International Settlements 2011. All rights reserved. Brief excerpts may be reproduced or translated provided the source is stated.*

ISBN print: 92-9131-867-1

ISBN web: 92-9197-867-1

Contents

1.	Interpretive issues regarding stressed value-at-risk.....	1
2.	Interpretive issues regarding the incremental risk capital (IRC) and comprehensive risk capital charges	4
2.1	Definition and scope.....	4
2.2	Incremental and comprehensive risk models.....	6
2.3	Qualitative requirements and IRC Guidelines	9
2.4	Specific risk/IRC and stressed VaR	10
3.	Interpretive issues regarding the standardised measurement method.....	10
3.1	General	10
3.2	Basis of assessment for securitisation positions: Application of market value.....	11
3.3	Application of maximum possible loss principle (“Max Loss”); and off-setting provisions of paragraphs 713 to 715 of the Basel II framework	12
4.	Other interpretive issues	13

Interpretive issues with respect to the revisions to the market risk framework

In this document, the Basel Committee on Banking Supervision (“the Committee”)¹ provides responses to interpretive issues regarding the *Revisions to the Basel II market risk framework* (“the Revisions”)² and the *Guidelines for computing capital for incremental risk in the trading book* (“the IRC Guidelines”).³ Updated versions of this document will be published on the Committee’s website if and when additional interpretive issues arise.

Unless stated otherwise, paragraph numbers given in the remainder of this document refer to the *International convergence of capital measurement and capital standards: A revised framework, comprehensive version*, June 2006, as amended through the *Revisions to the Basel II market risk framework (updated as of 31 December 2010)*, February 2011.

Questions which have been added since the previous version of the FAQs are shaded yellow, changes are shaded red.

1. Interpretive issues regarding stressed value-at-risk

1. *Does the stressed VaR apply to all risks included in the VaR model, or only to the general market risk component of that model?*

The stressed VaR applies to all risks (eg general interest rate risk; specific interest rate risk; commodity risk) for which the bank in question has approval from its supervisor to use an internal VaR model.

2. *Should the stressed VaR period be fixed (or stable) and the stressed VaR only respond to changes in the composition of the portfolio, or may the stressed-VaR also adjust to changes in risk factors (and if so, how much)?*

The intention of the stressed VaR requirement is to deliver the charge that the bank’s current VaR model would generate if the bank was experiencing a period of financial stress relevant to its portfolio. Therefore, the time-series data upon which the stressed VaR is calculated should be stable. However, the period used must be regularly reviewed by the bank and approved by the supervisor to ensure that it still represents a period of significant financial stress relevant to the bank’s portfolio.

¹ The Basel Committee on Banking Supervision consists of senior representatives of bank supervisory authorities and central banks from Argentina, Australia, Belgium, Brazil, Canada, China, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. It usually meets at the Bank for International Settlements (BIS) in Basel, Switzerland, where its permanent Secretariat is located.

² Basel Committee on Banking Supervision, *Revisions to the Basel II market risk framework, updated as of 31 December 2010*, February 2011.

³ Basel Committee on Banking Supervision, *Guidelines for computing capital for incremental risk in the trading book*, July 2009.

Also, to the extent that time series' data are used in the factor assessments, then these will also be fixed as a result of fixing the time series' data. However, to the extent that a bank changes its VaR engine, or risk factor approach, then these changes should be reflected in changes to the model used to calculate the stressed VaR measure.

3. *The text requires “a continuous 12-month period of significant financial stress”. Would this mean that supervisors exclude any period that would be less than 12 months even if particularly relevant to the portfolios and extremely stressful? Or are supervisors targeting a continuous 12-month period that includes a significant financial stress event (the latter lasting possibly less than 12 months)?*

The latter – supervisors are targeting a 12-month period that includes an appropriate financial stress.

4. *What exactly is meant by “anti-thetic” and “applying absolute rather than relative volatilities”? In the latter case, what is the reference period for determining whether the data is absolute or relative?*

Anti-thetic in this context means that price movements are considered relevant irrespective of their direction. For example, if a time series included a significant upward spike in equity prices, the model could apply significant movements in equity prices both upwards and downwards. This might be particularly relevant if a bank's portfolio is the “right way” to a period of financial stress (ie is long equities in a period of stock market surge); the model used should reflect that open risk positions (in either direction) are vulnerable to stressed variables.

5. *For the scenarios requiring no simulation from banks, the existing paragraph 718(Lxxxix) specifies that the loss information could be compared to the level of capital that results from a bank's internal measurement system. It should be specified whether this is only valid for the VaR component of the capital charge or for all components of the capital charge (VaR, stressed VaR, IRC and comprehensive risk capital charge).*

This paragraph is for supervisory use and could be used in a number of different ways, depending upon the data requested by the relevant supervisor. Supervisors would expect that the most relevant use would be a comparison of losses to the overall capital charge, but that does not preclude individual supervisors asking for information in different forms.

6. *If a bank should decide to use anti-thetic data to deliver the stressed value-at-risk, should it also use it to select the stressed period? That might make selecting the stressed period considerably more difficult because of the many possible combinations of the risk factors.*

No, see question 9 below.

7. *Does “using a weighting scheme that is not fully consistent with (d)” (footnote to paragraph 718(Lxxvii) (d)) include various methods to render the VaR model more reactive to market changes like, for example, models with time-dependent volatilities which use a period of less than a year to calibrate current volatility?*

Yes.

8. *If a bank opts for such a scheme, should it then use the same reactive scheme also for stressed VaR?*

No. The weighting scheme should not be used for stressed VaR.

9. *Regarding question 4 above, does this mean that banks in calculating stressed VaR, given the time period of one year (250 observations), have to consider an additional 250 observations by changing the sign of the risk factor movements?*

The stressed VaR charge is intended to deliver a capital charge based on a measure of VaR that would be applicable to the bank's current portfolio in a period of stress relevant to that portfolio. In principle, the easiest way to do this is to run the current VaR model based on historical data from a period of financial stress. However, there are two particular cases where this might be inappropriate:

- If a period of financial stress (which may be indicated by significantly higher volatilities) corresponds to directional moves which would lead to the bank making money, based on the current portfolio. In these circumstances, it might be appropriate to apply the risk factor movements in both the direction which is indicated by the historical data, and the opposite direction (anti-thetic) to ensure that the period of high volatility becomes more relevant to the bank's portfolio.
- In stressed periods, there are some price factors (eg credit spreads) which tend to have higher absolute values. Therefore, an increase in absolute volatility in these factors (ie large movements) might not correspond to significant increases in relative volatility (ie because the absolute level of the parameter is also higher). If the bank's current VaR model tracks relative shifts in these price factors, then the relevant period of stress applied in benign periods (ie when the absolute values of credit spreads are smaller) might not deliver a VaR measure which accurately reflects what the VaR would be in a period of stress. The bank should therefore consider modifying its VaR model to account for large absolute factor moves that can occur in times of stress.

This does not mean that the bank needs to look at a different 250-day period or an additional 250-day period by changing the sign of risk factor movements, but that it needs to think intelligently about how it translates the data from a 250-day period of stress into a stressed VaR measure.

10. *Is the stressed VaR also subject to a "use-test"?*

Yes, the VaR engine used to generate stressed VaR is subject to a use-test through the use of the current VaR calculated using the same engine. However, it may be that the stressed VaR output is not used in the day-to-day risk management decisions, because a different VaR measure is used.

2. Interpretive issues regarding the incremental risk capital (IRC) and comprehensive risk capital charges

2.1 Definition and scope

1. *What exactly is meant by “[...] that do not provide a pro-rata share in the proceeds of a securitisation tranche [...]” in paragraph 689(iv)?*

This provision is intended to capture any complex “double leverage” position, but which might not be captured by the definition of re-securitisation and therefore automatically excluded.

2. *The text specifies that “positions which reference a claim on a special purpose entity are not included either”. However, in the context of a securitisation operation, notes issued by an SPV are claims on this SPV/SPE (collateralised by asset portfolios). This may probably need further clarification. What was the exact purpose of the sentence? Certainly not to exclude all kind of structures using SPVs/SPEs.*

The intent is to ensure that the SPV structure is not used to evade the criteria limiting the types of positions that may be included in the correlation trading portfolio. Specifically, a bank must exclude from the correlation trading portfolio any SPV-issued instrument backed, directly or indirectly, by a position that would itself be excluded if held by the bank directly. Thus, notes issued by an SPV holding residential or commercial mortgages would not be eligible for inclusion in the correlation trading portfolio. However, a cash CDO position could be included in the correlation trading portfolio if the assets underlying the CDO met all of the relevant criteria (eg the underlyings are single-name corporate bonds having liquid two-way markets).

3. *The reference to mortgage-backed securities in paragraph 718(Lxxv) suggests they can remain within an internal models based approach and in VaR (the internal models approach); however, paragraph 9 of the Revisions indicates that the standardised measurement method should be used for all securitised products except for certain correlation trading activities for which a comprehensive risk capital charge can be calculated. Can non-correlation trading securitisations be incorporated in an internal models based approach?*

Securitisations which are not part of the correlation trading portfolio are subject to a general market risk charge and the standardised charge for specific risk. These positions must be included in the bank’s VaR model for general market risk or be subject to the standardised measurement charge for general market risk. While the positions may be included in the bank’s internal specific risk model, the specific risk capital charge for securitisations according to the standardised measurement method will apply as well.

4. *Should sovereign bonds be included in the IRC charge?*

Yes.

The definition of specific risk in paragraph 709(iii), first sentence, is quite generic. Consequently, it does not scope out any particular securities. When an acceptable IRC model identifies sovereign bonds as subject to migration and default risk, the capital charge should be determined accordingly. Even if certain sovereign bonds are subject to a risk weight of 0% under the standardised approach (cf. paragraph 710), they cannot be considered as free of default and migration risk. Therefore,

sovereign risk should be included in the scope of the incremental risk capital charge. Sovereign bonds must therefore be included in the relevant model. A general partial use of the standardised approach for sovereign bonds, ie exclusion of positions subject to a risk weight of 0% under the standardised approach from IRC, will not be granted. Accordingly, they will attract a capital charge under the IRC, except where the output of the model happens not to imply a capital charge for these positions.

5. *Will partial model approvals be allowed under the framework (eg, internal models for some credit positions, with standardised specific risk charges for positions not having approved IRC or comprehensive risk models)?*

Partial approval will be permitted on a case-by-case basis in line with local regulations. In particular, as new products and businesses arise supervisors may want to have the authority to restrict certain products from the IRC or comprehensive risk model. A simple model for partial approval would be:

- One set of products are approved for IRC. For these products there is a single comprehensive, fully integrated model, not a set of IRC models taken one at a time. Likewise, a similar approach would be used for comprehensive risk models.
- The remaining products attract the fallback capital charge according to the standardised measurement method.

To clarify, this does not mean that a bank would be able to have “partial use” for any particular element of specific interest rate risk (eg include corporate positions in VaR for specific risk without including corporates in the IRC charge). Supervisors should consider the risks of cherry picking if they allow partial use.

6. *Should Pfandbriefe (ie debt securities backed by cash flows from mortgage or public sector loans) be excluded from IRC?*

Pfandbriefe and other covered bonds that do not qualify as securitisations should be included in IRC.

7. *Due to paragraph 718(Lxxxvii-1-) the specific capital charges for securitisation exposures and n-th-to-default credit derivatives can not be calculated with an internal model. Paragraph 718(xciv) allows an exception to this only for positions in the correlation trading portfolio, if certain criteria are fulfilled. For positions where the specific risk capital charges can not be calculated with an internal model, the standardised measurement method applies. “Securitisation exposures” and “n-th-to-default credit derivatives” are relevant in different paragraphs of the trading book rules (paragraphs 709(ii), 709(ii-1-) and 718). Due to some cross references and the different use of “securitisation exposures” and “n-th-to-default credit derivatives” the question occurs if the max long/short treatment applies to securitisation exposures and n-th-to-default credit derivatives or only to securitisation exposures.*

The max long/short treatment applies not just to securitisation exposures, but also to n-th-to-default credit derivatives.

In detail: The overall capital charge for specific risk of all securitisation exposures and n-th-to-default credit derivatives in the correlation trading portfolio is calculated using the max long/short treatment. The overall capital charge for specific risk of all securitisation exposures and n-th-to-default credit derivatives outside the correlation trading portfolio may be calculated using the max long/short treatment only during a transitional period until 31 December 2013. After 31 December 2013 the overall

capital charge for specific risk of all securitisation exposures and n-th-to-default credit derivatives outside the correlation trading portfolio is calculated using the sum of the capital charge for the long positions and the capital charge for the short positions.

8. *Consider a risk position that is neither a securitisation position nor an n-th-to-default credit derivative, but which is included in the correlation trading portfolio (CTP) because a bank uses it to hedge a securitisation position or an n-th-to-default derivative of the CTP. The bank uses an internal model that incorporates specific risk and the risk position is included in this model.*

If the bank incorporates the CTP in a comprehensive risk measure as specified in paragraph 718(xcv), may it refrain from incorporating the risk position in the incremental risk charge (IRC) as specified in paragraphs 718(xcii) and 718(xciii)?

Yes. Paragraph 718(xcv) states: "For the exposures that the bank does incorporate in this internally developed approach, the bank will be required to subject them to a capital charge equal to the higher of the capital charge according to this internally developed approach and 8% of the capital charge for specific risk according to the standardised measurement method. It will not be required to subject these exposures to the treatment according to paragraph 718(xciii)." The reference to paragraph 718(xciii) should be read as referring to both paragraphs 718(xcii) and 718(xciii), as these two paragraphs together define the IRC.

2.2 Incremental and comprehensive risk models

1. *It would be important for banks to be allowed to enhance the IRC model to leave the correlation book inside (ie, try to comply with the comprehensive risk measure but within the IRC model). Would it be acceptable to extend the IRC framework to comply with the comprehensive risk measure and perform a single calculation?*

Banks are allowed to enhance the IRC model to comply with the requirements for the comprehensive risk measure. However, they are not allowed to perform a single calculation covering exposures subject to the IRC charge and exposures subject to the comprehensive risk capital charge. Disallowing a single calculation has the effect of not allowing any diversification between the portfolios.

2. *Do all of the correlation trading risks listed in paragraph 718(xcv) need to be included in a single model, or could a bank treat them outside the main modelling framework with supervisory approval? Can the bank use separate models for different products, or separate models for different risk factors?*

While in principle an integrated modelling approach is desirable, supervisors need to be realistic, and there are practical issues that banks will face to deliver an integrated model. Supervisors may permit approaches that capitalise different risks differently (eg via an add-on approach), provided that this can be undertaken conservatively and it does not undermine the strength of risk management. However, the capital charges calculated with the different models would have to be added using a simple sum and banks should be strongly encouraged to develop an integrated approach over time.

3. *What is the link between the liquidity horizon and issuer concentration? Would it be better to address issuer concentration through the correlation assumptions? (See IRC Guidelines, paragraph 23.)*

No. Where a bank has concentrated positions in terms of the market this should be reflected in a longer liquidity horizon – consistent with the view that it takes longer to liquidate concentrated positions. Concentrated positions in terms of the bank's portfolio would be reflected in the correlations inherent in the model.

4. *Would it be possible for an institution to use for purposes of the comprehensive risk capital charge a model substantially different from the IRC model? For example, a VaR model (99.9%, 1 year).*

In principle, the model could be substantially different from that used for IRC. However, a 99.9% one-year VaR would have serious shortcomings as a measure to capture the set of comprehensive risks required by this charge. These risks would need to be addressed if any bank were thinking of applying a VaR-type approach for the comprehensive risk measure. Just extending the current VaR measure to a 99.9% one-year VaR is not sufficient.

5. *Paragraph 718(xcv) requires a bank to capture “the cumulative risk arising from multiple defaults, including the ordering of defaults, in trached products”. Is it really necessary to model the ordering of defaults? The value of a tranche at a predetermined date (eg at the liquidity horizon) should only depend on the number of defaults in this period but not on the order. Do we have any examples where the order of default determines the price (risk) of a tranche?*

If the order of defaults does not have a price impact, the CRM simulation does not need to take the order into account.

6. *Normal copula assumptions*

Is it accepted that banks model issuer interdependence assuming multivariate normal distributions or normal copula (eg between asset values, credit spreads or default times) or must they show that such model assumptions do not underestimate risk? (Reference: paragraph 718(xciii) for IRC; paragraph 718(xcv) in combination with the relevant rules on IRC)

Background: It is very hard to find clear empirical support for any particular copula. Among various modelling choices, the normal copula is often chosen for its simplicity (for example within the regulatory IRB framework). However, it is known to provide very thin tails in the loss distribution and may thus provide significantly smaller loss estimates than other choices.

The onus is on the bank to justify the modelling choices and their impact to the national supervisor. Normal distributions or normal copula may not be assumed uncritically. The impact of such modelling choices must be analysed in the validation.

7. *The revised market risk framework mentions only tranches and n-th-to-default products explicitly, but not n-th to n+m-th-to-default products (eg the value depends on the default of the 5th, 6th, 7th and 8th default in a pool; only in specific cases such as the same nominal for all underlyings can this product be represented by, for example, a 5% to 8% tranche). Are n-th to n+m-th-to-default products covered in the framework? (Reference: paragraph 718)*

Yes. Such products are to be decomposed into individual nth-to-default products and the rules for nth-to-default products in paragraph 718 apply. The answer to question 2.1.7 applies as well.

In the example cited above, the capital charge for a basket default swap covering defaults 5 through 8 would be calculated as the sum of the capital charges for a 5th-to-default swap, a 6th-to-default swap, a 7th-to-default swap and an 8th-to-default swap.

8. *Are there any specific regulatory requirements on the level of pro-cyclicality of an IRC model (on the continuum between reactive “point-in-time” and stable “through-the-cycle”)?*

There are no particular regulatory standards on what level of cyclicity of the estimates from an IRC model are acceptable.

9. *Are banks expected to perform their own evaluation of the (joint) distributional assumptions in their IRC model (including the structure of stochastic dependencies and copulas/correlations, as well as the number of stochastic factors)?*

Yes. Despite the relatively limited amount of relevant historical data, the (joint) distributional assumptions in an IRC model should not remain unchallenged, because of their material impact on the IRC figure.

The justification of these distributional assumptions forms an element in the justification of the IRC model's design, since the entirety of interlinked modelling choices establishes whether an IRC model is suitable for estimating losses at the 99.9% confidence level.

10. *An IRC model could employ input parameters which are related to IRB parameters (such as PDs/LGDs) or come from external sources (such as credit spreads and estimates of default/loss rates). Should banks justify the applicability of such exposure-dependent inputs within their IRC model?*

Yes. Banks should evidence the appropriateness of exposure-related parameters as inputs to their IRC model. Depending on their IRC model's design, this could concern parameters such as credit rating data, IRB PDs/LGDs and other estimates of default/loss rates, credit spreads, mappings (eg from ratings to credit spreads), rating transition matrices, etc.

As mentioned in the answer on question 2.2.9, the justification of the parameters employed forms an element in the justification of the IRC model's design.

Furthermore, paragraph 28 of the IRC Guidelines explicitly requires that significant basis risks should be reflected in the IRC model.

11. *Referring to question 2.2.2, should the comprehensive risk measure take all risk factors into account, and not only those explicitly listed in paragraph 718(xcv), hence, also foreign exchange, equity, commodity risk, etc?*

Yes. The implementation of a comprehensive risk measure is required to capture all material risks in a bank's portfolio, including significant basis risks, and should therefore take into account all (material) risk factors. Approaches which capitalise different risk factors differently (eg via add-ons) may be permitted, provided that this can be undertaken conservatively and it does not undermine the strength of risk management, as mentioned in the answer to question 2.2.2.

12. *When we talk about migration risk, is it the risk of a downgrade of the internal rating that a bank gives to a debtor in the IRB framework, or is it the risk of the downgrade of an external rating of a debtor in the trading book? If it is external, should the bank choose a rating agency as the standard for the definition of migration?*

According to paragraph 11 of the IRC Guidelines the credit migration risk part of the charge can be determined on the basis of migrations of internal or external ratings. The bank's choice may be guided in particular by an assessment of which kind of ratings are closer related to the changes of credit spreads that the bank observes in the market. The bank must apply its methodology in a consistent and well-reasoned way. Subject to this constraint the bank need not give priority to any particular external rating agency.

2.3 Qualitative requirements and IRC Guidelines

1. *The following questions relate to the interpretation of the netting requirement that positions must "refer to the same financial instrument" as set out in paragraph 27 of the IRC Guidelines: Can bonds that are deliverable into a CDS be netted against those CDS? Can (otherwise identical) CDS with different maturities be netted? Does the answer change if both CDS have residual maturities beyond the one year capital horizon? Can total return swaps (TRS) be netted with the instruments that they reference? The standard specific risk rules do not require maturity matches for such netting. Is this also the case for IRC?*

The offsetting treatment described in paragraphs 713 to 715 under the standardised measurement method is not applicable to modelled approaches. As stated in paragraph 27 of the IRC Guidelines, within the IRC model, exposure amounts may be netted only when long and short positions refer to the same financial instrument. (Note that under the IRC – in contrast to the standardised measurement method – a TRS can only be netted against the underlying reference obligation when there is no maturity mismatch, ie when the TRS is of the same maturity as the underlying.) When long and short positions do not refer to the same financial instrument, exposure amounts must be captured in the IRC model on a "non-netted" basis. (A CDS is, of course, not the same financial instrument as a bond that is deliverable into the CDS.) In other words all short and long positions must be captured and modelled separately in order to reflect basis risks in the model.

2.4 Specific risk/IRC and stressed VaR

1. *If a bank applies the comprehensive risk modelling approach to the correlation portfolio, does it also need to incorporate the specific risks of this model within its VaR and stressed VaR models?*

Yes. The IRC, comprehensive risk measure and stressed VaR should be viewed as supplemental capital measures that generally **do not** affect the current capital framework for VaR and specific risk. However, banks need not capture default and migration risks for positions subject to the incremental risk capital charge referred to in paragraphs 718(xcii) and 718(xciii) (see footnote to paragraph 718(Lxxxviii)).

In addition, the incremental risk capital charge covers default and migration risks (paragraph 718(xcii)), whereas the comprehensive risk capital charge covers all price risks (paragraph 718(xcv)). The Committee's fundamental review may address these and other double counting issues.

3. Interpretive issues regarding the standardised measurement method

3.1 General

1. *What could be the conditions under which trading book positions that are subject to interest rate specific risk could be netted in order to derive either the net long position or the net short position? Are the rules considering a perfect hedge only? Is it allowed to net cash and synthetic securitisations for the purpose of the capital calculation for structured products under the standardised approach for correlation trading?*

Netting is only allowed under limited circumstances for interest rate specific risk as explained in paragraph 709(iii):

“offsetting will be restricted to matched positions in the identical issue (including positions in derivatives). Even if the issuer is the same, no offsetting will be permitted between different issues since differences in coupon rates, liquidity, call features, etc means that prices may diverge in the short run.”

In addition, partial offsetting is allowed in two other sets of circumstances:

1. One set of circumstances is described in paragraph 718 and concerns n-th-to-default basket products.
2. The other set of circumstances described in paragraphs 713 to 715 pertains to offsetting between a credit derivative (whether total return swap or credit default swap) and the underlying exposure (ie cash position). Although this treatment applies generally in a one-for-one fashion, it is possible that multiple instruments could combine to create a hedge that would be eligible for consideration for partial offsetting. Supervisors should recognise that, in the case of multiple instruments comprising one side of the position, necessary conditions (ie value of two legs moving in opposite directions, key contractual features of the credit derivative, identical

reference obligations and currency/maturity mismatches) will be extremely difficult to meet, in practice.

2. *In the Revisions, the text envisages the possibility of using the supervisory formula approach for securitisation positions, with inputs for Kirb consistent with the IRC principles, notably in terms of PD and LGD. However, the IRC Guidelines are silent on these aspects (even if mentioning broadly that the soundness of the approach should be comparable to IRB). In addition, securitisation positions are specifically excluded from the IRC Guidelines, producing a sort of inconsistency. How in practice could IRC be used as a basis for the supervisory formula approach without further specifications?*

Under the IRC the banks may have estimates, say, for PDs with a forecasting horizon for less than a year, eg when the liquidity horizon is three months banks may also estimate PDs over a horizon of three months in the first instance. The internal ratings-based approach, however, requires PD estimates over a one-year horizon. Applied to this example the rules permit the bank to map its PD from a three-months horizon to a one-year horizon, if this is done in a reasonable way. The rules deliberately refrain from giving any detail to avoid unduly restricting banks in the approach they use for this mapping.

3. *According to paragraph 712(vi)(c), banks can apply the concentration ratio to the securitised exposures under the standardised approach. Can this approach apply to banks that are on foundation or advanced IRB approaches?*

Yes. Subject to supervisory approval, any bank not applying the Supervisory Formula Approach (either using IRB inputs under 712(vi)(a) or IRC inputs under 712(vi)(b)) is permitted to use the concentration ratio approach outlined in 712(vi)(c). It should be noted that this approach requires that weightings which would be applicable under the standardised approach be used in conjunction with the concentration ratio, even if the bank would normally apply the IRB approach to securitisation positions in the banking book.

4. *Can the approach of taking the larger of the specific risk capital charges for net long positions and the specific risk capital charge for net short positions be applied to leveraged securitisation positions or option products on securitisation positions?*

No. Leveraged securitisation positions and option products on securitisation positions are securitisation positions. They are not admissible for the CTP according to paragraph 689(iv). Therefore, the max long/short treatment can only be applied during a transitional period ending 31 December 2013, according to paragraph 709(ii-1-). After 31 December 2013 the capital requirement for specific risk will be determined as the sum of the capital charges for specific risk against net long and net short positions.

3.2 Basis of assessment for securitisation positions: Application of market value

Cash positions

The bank holds externally rated, net long securitisation positions that have already incurred large MTM write-downs and that have been severely downgraded by the rating agency. It is argued that these positions incur excessive capital charges under the RBA because external ratings focus either on the probability of losses relative to contractual terms (S&P and Fitch),

or on expected losses relative to contractual terms (Moody's), rather than on the likelihood or expected level of future losses beyond those already recognised.

- Suppose a bank holds a long position in an ABS that initially was rated AAA, but subsequently has been downgraded. Suppose the ABS has been written down from (\$100=par value) to \$65. If the ABS currently is C-rated, the bank applies the RBA and determines that it must deduct \$65 from capital. Alternatively, if the current rating is BB-flat (425% RW), the bank calculates its capital charge to be \$22.10 ($=4.25 \times 0.08 \times \65) → RWA of \$276.25.

The agreed treatment is that the market value of cash positions is used as the basis of the "position" to which the standard measurement method (SMM) capital charges apply. The correct treatment is, therefore, applied in the above example.

- Suppose in the above example that the bank holds a net short securitisation position rather than a net long position. The bank calculates the capital charge for this position based on (the absolute value of) the market value. If the ABS has fallen in value from \$100=par value to \$65, this implies unrealised gains on the short position of \$35. If the ABS currently is C-rated, the bank applies the RBA and determines that it must deduct \$65 from capital. Alternatively, if the current rating is BB-flat (425% RW), the bank calculates its capital charge to be \$22.10 ($=4.25 \times 0.08 \times \65) → RWA of \$276.25. The capital charge for a short position in an ABS therefore equals the capital charge of a long position.

The agreed treatment is that the market value is used as the basis of the "position" to which the standard measurement method (SMM) capital charges apply. The correct treatment is, therefore, applied in the above example.

3.3 Application of maximum possible loss principle ("Max Loss"); and off-setting provisions of paragraphs 713 to 715 of the Basel II framework

When a bank buys credit protection for an ABS tranche and (due to netting rules) the bank is treated as having a net short position, QIS respondents note that the standardised capital charge for the net short position is often determined by the max potential loss. This is particularly true when the underlying ABS tranche has been severely downgraded and written down. In particular, banks note that if the underlying ABS continues to deteriorate, the overall capital charge progressively increases and is dominated by the charge against the short side of the hedged position.

Some examples (without and with off-set) illustrate how the Max Loss principle should apply:

Max Loss without offset

Suppose the bank has net long and net short positions that reference similar, but not the same, underlying assets. In other words the bank hedges an A-rated mezzanine RMBS tranche (notional=\$100) with a CDS on a similar but different A-rated mezzanine RMBS (also having notional=\$100).

Suppose the RMBS tranche owned by the bank is now rated C, and has value \$15. Also assume that the value of the CDS on the different RMBS has a current value of \$80. Further, suppose that the current value of the RMBS underlying this CDS is \$20 and is also rated C. Finally, suppose that the CDS would be valued at -\$2 if the underlying RMBS tranche were to recover unexpectedly and become risk free.

The correct treatment is as follows:

$\min(\$15, \$15) + \min(\$20, \$82) = \$35$.

(Long Leg) (Short Leg)

No off-set would be permissible in this example, because the same underlying asset has not been hedged. The capital charge should, therefore, be calculated by summing the charges against the long and short legs. The maximum loss principle would apply to each individual position.

Please note that the market value of the underlying has been applied in determining the exposure value of the CDS.

Max Loss with offset

Suppose the bank hedges an A-rated mezzanine RMBS tranche with a CDS referencing the same RMBS having notional of \$100. Suppose the RMBS tranche is now rated C, and has value \$15, while the current value of the CDS is \$85. Suppose that the value of the CDS would equal -\$2 if the RMBS tranche were to recover unexpectedly and become risk free.

In this example, if the CDS exactly matched the RMBS in tenor, then off-setting could potentially apply. In that instance, the capital charge should equal 20% of $\max\{\min(\$15, \$15), \min(\$15, \$87)\} = \$3$.

If the tenors were not matched (ie maturity mismatch), then the capital charge should equal $\max\{\min(\$15, \$15), \min(\$15, \$87)\} = \$15$.

Please note that the maximum loss principle cannot be applied on a portfolio basis.

4. Other interpretive issues

1. *Should valuation adjustments be performed on a portfolio level (ie adjustments to be made in the form of a reserve for a portfolio of exposures and not to be reflected in the valuation of the individual transactions) or on a transaction level (ie adjustments to be reflected in the valuation of the individual transactions)?*

Paragraphs 718(cviii) to (cxii).

Supervisors expect that the valuation adjustment will be considered for positions individually.

2. *Should the positions in a securitisation warehouse for which the bank has elected fair value be subject to the banking book regulatory capital charges?*

Positions that belong to a securitisation warehouse do not meet the definition of the trading book. This applies irrespective of their accounting treatment.