

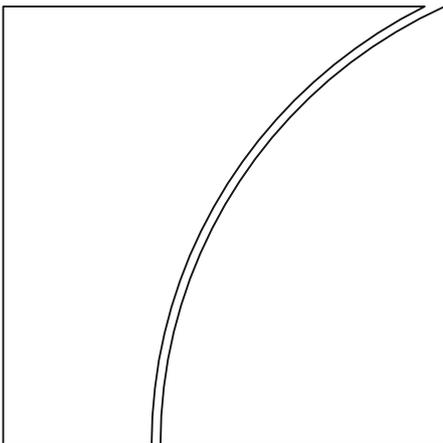
Basel Committee
on Banking Supervision

Consultative Document

**Recognising the cost of
credit protection
purchased**

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Recognising the Cost of Credit Protection Purchased

Background

The Basel II capital framework recognises that credit risk mitigation techniques can significantly reduce credit risk at a bank. In particular, paragraph 140 of the framework establishes that where guarantees or credit derivatives are direct, explicit, irrevocable and unconditional, and supervisors are satisfied that banks fulfil certain minimum operational conditions relating to risk management processes, banks may take account of such credit protection in calculating capital requirements.

Nevertheless, the Committee notes that, despite the current Pillar 2 provisions in the Basel framework to address the appropriateness of protection recognised against certain exposures (in particular first loss credit enhancements),¹ there exists potential for capital arbitrage within the credit risk mitigation framework, including use of credit risk mitigation for securitisation exposures, particularly when (i) there is a delay in recognising the cost of protection in earnings while (ii) the bank receives an immediate regulatory capital benefit in the form of a lower risk weight on an exposure on which it is nominally transferring risk. In such instances, there may be no meaningful transfer of risk. For example, consider a bank that purchases credit protection on a first-loss retained securitisation position where the cost of protection is equal to the recorded value of the securitisation tranche on which protection is being purchased or where the terms and conditions of the contract ensure that the premiums paid throughout the life of the contract will equal the amount of the realised losses. Regulatory capital arbitrage may exist where the immediate capital relief recognised for credit protection purchased ultimately will be offset by the premiums paid and recognised in earnings over the life of the contract.

While the example above focuses on the use of credit risk mitigation in a securitisation transaction, arbitrage opportunities exist more generally under the credit risk mitigation framework; however, the arbitrage opportunities are more likely to occur when credit risk mitigation techniques are used for securitisation transactions, where the difference in the risk weight before and after buying protection can be very large.

The Committee recognises that the purchase of credit protection can be an effective risk management tool. The proposed changes set forth below are intended to ensure that the costs, as well as the benefits, of purchased credit protection are appropriately recognised in regulatory capital. In developing this proposal, the Committee has attempted to balance the pros and cons involved in having a consistent, quantitative, and formulaic approach with the pros and cons of a more qualitative, flexible approach to deal with the variety of transaction structures that have been observed in the market, as well as those that might appear in the future.

In December 2011, the Committee issued a public statement on high-cost credit protection transactions.² That document stated that the “Basel Committee [would] continue to monitor developments with respect to high-cost credit protection transactions and [would] consider taking a more comprehensive Pillar 1 approach to these transactions.” Based on continued activity in high-cost credit protection transactions, the Committee has chosen to move forward with the more comprehensive Pillar 1 proposal articulated below.

¹ See paragraph 795 of the Basel framework, available at www.bis.org/publ/bcbsca.htm.

² See “High-cost credit protection: statement issued by the Basel Committee”, 16 December 2011, available at www.bis.org/publ/bcbs_n16.htm.

Overview of Proposal

The Committee proposes to modify the credit risk mitigation framework by adding provisions to paragraph 189 that, under certain circumstances, would require banks to calculate the present value of premia for credit protection purchased that has not yet been recognised in earnings. This calculation would be done in an appropriately conservative manner. The present value amount shall be considered as an exposure amount of the protection-purchasing bank and be assigned a 1250% risk weight. When applying the securitisation framework, such present value of the cost of protection should be taken into account in the assessment of significant risk transfer and should be treated as a retained position for this purpose.

To reduce unnecessary burden, the Committee also proposes to provide national supervisors with a materiality threshold. Exposures that would otherwise receive, at the time the credit protection is bought, a risk weight of greater than 150% in the absence of credit protection involve premia that should be considered material. This is meant to provide a reasonable limit at which concerns about potential arbitraging of the capital standards are more likely to occur, as relatively large premium payments are more likely for higher risk positions. Providing this threshold is also intended to reduce undue burden on banks of having to calculate and incorporate credit protection costs on credit risk mitigation (CRM) transactions where the cost is relatively immaterial and risk transfer is more likely to be meaningful. While arbitrage opportunities on a given CRM transaction are amplified when the risk weight of the reference exposure is high, the potential for arbitrage still exists for relatively lower risk-weighted reference exposures. This is why the Committee also proposes to give supervisors the opportunity to determine that the cost of protection is material even if the risk weight is below or equal to the 150% threshold.

Q1. *In addition to the 150% risk-weight threshold, should additional exemptions for certain types of transactions be considered? In particular, the Committee welcomes feedback on (1) exposures guaranteed by governmental entities (including sovereigns and public sector entities) and (2) trade finance transactions with guarantees.*

While the proposal currently provides significant supervisory discretion to calculate the present value of the cost of protection, the Committee is also including additional guidance to facilitate consistent implementation of the proposed changes.

The proposed changes also include amendments to the securitisation framework related to the assessment of significant risk transfer. In order for securitised exposures to be de-recognised for capital purposes, significant credit risk associated with the securitised exposures must be transferred to third parties. The proposed changes require that material costs of credit protection be considered in this analysis.

Q2: *The Committee welcomes feedback on all aspects of the proposed changes to the rules text and the supplementary technical guidance.*

Proposed Changes to the Credit Risk Mitigation Framework

The Committee proposes to add the *italicised and underlined* text below to the operational requirements for guarantees and credit derivatives under the credit risk mitigation section of the Basel framework. The text that is not both italicised and underlined is copied from the existing framework for ease of reference.

5. Guarantees and credit derivatives

(i) Operational requirements

Operational requirements common to guarantees and credit derivatives

189. A guarantee (counter-guarantee) or credit derivative must represent a direct claim on the protection provider and must be explicitly referenced to specific exposures or a pool of exposures, so that the extent of the cover is clearly defined and incontrovertible. Other than non-payment by a protection purchaser of money due in respect of the credit protection contract it must be irrevocable; there must be no clause in the contract that would allow the protection provider unilaterally to cancel the credit cover or that would increase the effective cost of cover as a result of deteriorating credit quality in the hedged exposure. It must also be unconditional; there should be no clause in the protection contract outside the direct control of the bank that could prevent the protection provider from being obliged to pay out in a timely manner in the event that the original counterparty fails to make the payment(s) due.

Adjustments for the cost of credit protection not recognised in earnings

189(a) A bank must calculate the present value of material credit protection costs (as recognised in 189(b)) in an appropriately conservative manner if such costs have not been recognised in earnings or otherwise recognised in Common Equity Tier 1. The present value should be treated as an exposure of the bank and be assigned a 1250% risk weight.

189(b) Credit protection costs will be considered material when the risk weight on the exposure in the absence of credit protection would otherwise be greater than 150% at the time the credit protection is bought.³ Notwithstanding this threshold, national supervisors may determine that the cost of protection is material, and therefore the provision in paragraph 189(a) applies, even if the risk weight is equal to or lower than 150%. In using this discretion, national supervisors may consider a variety of factors, such as the terms and conditions of the protection contract, on a case by case basis. Particular attention is warranted in the presence of rebate mechanisms or where protection premia are not proportional to the risk being covered, such as premia that are guaranteed without regard to credit deterioration in the reference exposure.

Proposed Changes to the Securitisation Framework

The following changes are being proposed to the operational requirements for traditional and synthetic securitisations. These changes will require a bank to consider whether the cost of credit protection is material as part of its assessment of whether a securitisation transaction has resulted in significant risk transfer. The text that is both italicised and underlined is new, while all other language is repeated from the existing framework for ease of reference.

Operational requirements for traditional securitisations

554. An originating bank may exclude securitised exposures from the calculation of risk-weighted assets only if all of the following conditions have been met. Banks meeting these conditions must still hold regulatory capital against any securitisation exposures they retain.

³ When applied to securitisations, the 150% risk-weight threshold applies to the securitisation tranche and not to the risk weight of the underlying assets.

(a) Significant credit risk associated with the securitised exposures has been transferred to third parties. Banks must incorporate in this assessment the cost of credit protection purchased in the form of a guarantee or credit derivative that is considered material and therefore a retained position under paragraph 189(a). For transactions where a bank has not transferred significant credit risk through the purchase of credit protection, paragraph 189(a) with regard to the present value of the cost of protection will not apply.

Operational requirements for synthetic securitisations

555. For synthetic securitisations, the use of CRM techniques (ie collateral, guarantees and credit derivatives) for hedging the underlying exposure may be recognised for risk-based capital purposes only if the conditions outlined below are satisfied:

(d) Banks must transfer significant credit risk associated with the underlying exposure to third parties. Banks must incorporate in this assessment the cost of credit protection purchased in the form of a guarantee or credit derivative that is considered material and therefore a retained position under paragraph 189(a). For transactions where a bank has not transferred significant credit risk through the purchase of credit protection, paragraph 189(a) with regard to the present value of the cost of protection will not apply.

Technical guidance

The following elements are issues where, rather than specifying a single Pillar 1 approach, it is desirable to retain flexibility to deal with unique deal structures and therefore, guidance is provided in the Annex on the following issues:

1. Calculation of the present value of the cost of protection, including examples for proportional and non-proportional premia, and based upon various discount rates (risk-free and risk-based). Include guidance on how national supervisors may, on an optional basis, recognise spread income, and examples showing that the recognition of spread income is more acceptable in case of proportional premia.
2. Examples of situations (eg rebate mechanisms) where national supervisors may determine that the cost of protection is material even if the risk weight is lower than or equal to 150%.
3. Examples of significant risk transfer assessments.
4. Situations of whether, and how, losses that are already recognised on an exposure, by reducing the on-balance sheet value of the exposure and by reducing earnings, should be considered in evaluating the costs of the protection relative to the carrying value of the exposure.
5. Treatment of maturity mismatches.

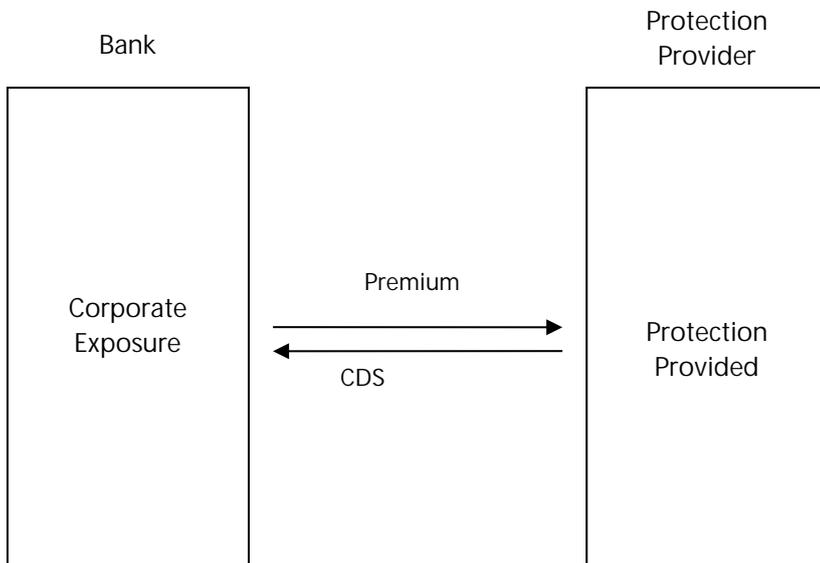
Annex

Technical guidance⁴

This annex provides technical supervisory guidance where, rather than specifying a single Pillar 1 approach, it is desirable to retain flexibility to deal with unique deal structures. Throughout this annex, four example transactions are considered:

- Transactions A and B comprise the purchase of a credit default swap (CDS) against the credit risk on a single name corporate bond (ie CRM example); and,
- Transactions C and D involve the synthetic purchase of credit protection on a pool of assets (ie synthetic securitisation example).

The basic structure of transaction A and B is as follows:



The details of these two transactions are:

Transaction A

- Bank holds single name corporate bond which has book value 100 and maturity of 5 years.
- Corporate bond attracts a risk weight (RW) of 200% (via an IRB approach), giving risk-weighted assets (RWA) of 200.
- Bank buys a CDS with maturity of 5 years against the bond issuer from a 0% RW counterparty.
- CDS has a running premium of 100bp per annum and no upfront premium.
- Premium payments are due annually in arrears.
- Loss Given Default (LGD) of the corporate bond is 80%.

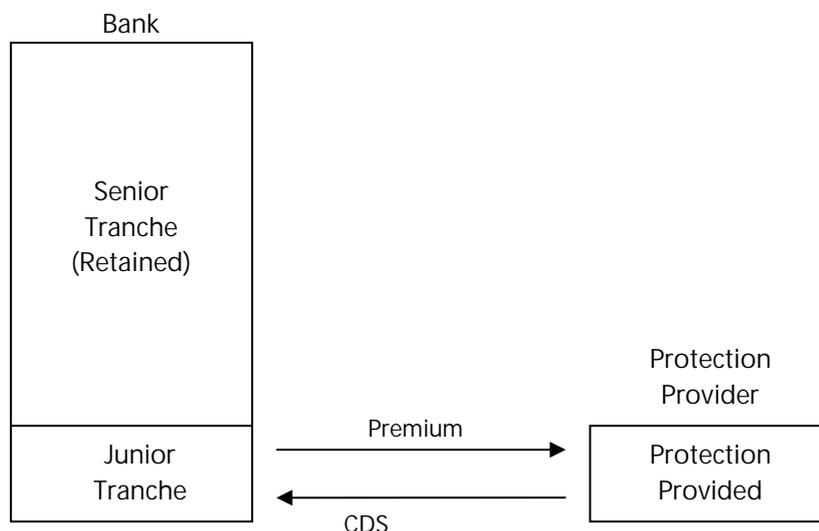
⁴ Throughout this guidance, all calculations refer to the existing Basel II securitisation framework. The Committee is considering revisions to its Basel securitisation framework and in December 2012 published a consultative document, "Revisions to the Basel Securitisation Framework", available at: www.bis.org/publ/bcbs236.pdf.

Transaction B

- As transaction A, except that there is an upfront premium of 500bp and no running premium.

Note: For illustrative purposes we assume the upfront premium in Transaction B can be amortised over 5 years on a straight-line basis for accounting purposes.

The basic structure of transactions C and D is as follows:



The details of these two transactions are:

Transaction C

- Bank originates assets that have principal and book value of 100.
- RWA before securitisation of 200.
- Bank synthetically securitises assets by purchasing credit protection on a first loss tranche with principal of 10 from a 0% RW counterparty.
- Bank retains exposure to the senior tranche (90).
- Protection cost is 20% per annum of the protected position at start of each period (ie reducing for losses and amortisations), capped at total pool spread income after costs (ie if protection costs in a period would exceed pool spread income only the pool spread income would be payable).
- Premium payments are due annually in arrears.
- LGD of the underlying assets is 80%.
- Maturity of assets and transaction is 5 years.
- Pool spread income per annum after costs is 5% of the outstanding pool per annum.
- Expected loss on the pool is 2% of the outstanding pool per annum.
- Expected amortisation of the pool is 0% per annum.
- RW applicable to retained position is assumed to be 7% (either under the Ratings Based Approach (RBA) or under the Supervisory Formula Approach (SFA)).

Transaction D

As transaction C, except that protection cost is a guaranteed amount of 15% of the notional amount of the position protected at the start of the transaction per annum.

Note: Under paragraph 555 of the Basel framework banks may only recognise credit protection in respect of synthetic securitisations if significant credit risk is transferred to third parties and paragraph 189(a) will only apply if this is the case. It is assumed that significant risk has been transferred in respect of both of these transactions to illustrate the capital impact in the event that paragraph 189(a) applies.

(1) Present value calculations and recognition of spread income⁵

Under the proposed framework banks will be required to “calculate the present value of material credit protection costs” ... “in an appropriately conservative manner if such costs have not been recognised in earnings”.

This section sets out criteria that supervisors may consider when assessing whether such a calculation is appropriately conservative in respect of:

- (1.1) Present value calculations of credit protection costs.
- (1.2) Potential recognition of spread income in credit protection costs.

(1.1) Present value of calculations of credit protection costs

The following approaches to discounting could be viewed by supervisors as being “suitably conservative”:

- (i) Applying a risk-free discount rate⁶ in all circumstances.
- (ii) Applying a risk-free discount rate when the premium is guaranteed (ie non-contingent, as defined below), but a “risky” discount rate when the payment of premium is contingent on the size of the position being protected.⁷ When allowing this method, supervisors would determine when (ie in which scenarios) a risky discount rate is justified and what that rate should be.

Generally, a credit protection premium reflects the risk of the protected position. If the premium is contingent on the size of the position being protected, the premium has a similar riskiness to the protected position. In this case, a risky rate based on the premium would be appropriate. However,

⁵ In this guidance “spread income” is defined as being the gross income net of relevant costs. The following costs and fees should be deducted from spread income:

- Servicing fees
- Legal Fees
- Funding Costs
- (Potentially, also origination costs, if so determined by supervisors).

For example, if the expected spread income after costs is 5% of the outstanding pool per annum, the expected spread income before costs would be a higher amount (eg 8% of the outstanding pool per annum) with the difference being accounted for by the above costs (eg 1% in respect of servicing costs and 2% in respect of funding costs).

⁶ Supervisors could determine a risk-free discount rate with reference to an appropriate government or inter-bank rate, or could require firms to determine the risk-free rate.

⁷ Applying a “risky” discount rate in all circumstances is not considered to be suitably conservative because this can result in an excessively low present value when premia are guaranteed.

in some cases the premium has a different risk profile than the protected position, and in this case basing the present value rate on the premium would not appropriately reflect the risk.

In order to determine an appropriate risky rate, supervisors may wish to define circumstances in which premia are considered to be contingent on the size of the position being protected, and therefore, have a similar risk profile to that of the protected position. While the conditions below are not intended to be an exhaustive list, the credit protection costs might be considered "*contingent premia*" when the following conditions are met:

- The credit protection costs are a constant percentage of the contemporaneous exposure amount after adjusting for amortisation and losses, subject to any applicable cap on credit protection costs.
- Any applicable cap on credit protection costs are not expected to materially impact the credit protection costs except in highly unlikely scenarios. (It would, for example, generally be acceptable to set a cap as a proportion of spread income received from the portfolio provided that this is highly unlikely to bind. On the other hand, if the premium payable would be equal to the cap in most plausible scenarios the premium would in practice likely be a constant amount and would therefore have very similar characteristics to a guaranteed premium and should not be considered to be contingent.)
- Upfront credit protection costs are deducted, 1250% risk-weighted or recognised in earnings.
- Adjustments to credit protection costs for losses (as mentioned in the first bullet point above) are effective from the first premium due after the day the relevant credit event occurred.
- The credit protection costs are payable at least semi-annually.⁸
- There are no payments at all (except the premium, protection payments and collateral posting) when the transaction terminates, unless it is clearly and solely intended to bring the parties into the economic position they would be in had the contract continued to exist.
- The default risk of the protected position is not concentrated just on the final part of the period for which the credit protection is bought.

Where supervisors wish to allow the use of a risky discount rate in calculating the present value of protection costs, the discount rate applied should be suitably conservative and may reflect the implied probability of a credit protection event occurring and/or expected pre-payments. Where both are included, applying a risky discount rate becomes analogous to applying a risk-free premium on expected premiums.

The following approaches are examples of "risky" discount rates that may be permitted by supervisors:

- (i) Discounting at a "risky" rate equal to the sum of the default rate implied by the contractual premiums, the expected amortisation rate and the risk-free rate. The discount rate should be calculated using the following formulae:⁹

For non-securitisation positions:

⁸ Premiums should be paid at least semi-annually because if they are paid less frequently, they can contain a large guaranteed element. Note that for simplicity the examples of credit protection costs in this guidance are shown with annual payments, but should be assumed to be contingent if they would otherwise meet the definition.

⁹ Note that for single name positions, contractual premiums will reflect Probability of Default (PD) and Loss Given Default (LGD), and since premiums cease to be payable in the event of a default event it is necessary to divide by LGD to obtain the appropriate discount rate. Conversely, for securitisation positions premiums payable are retrospectively recalculated to reflect any recoveries and, therefore, depend on the ultimate losses in the pool. Therefore, there is no need to divide by LGD to obtain the appropriate discount rate.

$$r = \frac{P}{E(LGD)} + E(CPR) + r^*$$

For securitisation positions:

$$r = p + E(CPR) + r^*$$

where:

"*p*" is the annual contractual credit protection costs as a proportion of the position being protected. As an alternative, some supervisors may permit firms to take "*p*" as the current implied market premium for the position;

"*E(LGD)*" is expected loss to the position given that it has sustained some loss;¹⁰

"*E(CPR)*" is the expected annual conditional prepayment and repayment rate; and

"*r**" is the risk-free rate.

- (ii) Assuming $E(LGD) = 1$ and / or $E(CPR) = 0$ in the above formula where this is considered necessary to achieve a suitable degree of conservatism.
- (iii) Where a securitisation position is being protected, calculating the present values using parameters from the pool rather than the position being protected, if the supervisor considers this to be conservative.
- (iv) Discounting based on a bank estimate or supervisory estimate of the probability of losses occurring as an alternative to inferring this from contractual premiums, where the supervisor considers this to be conservative.
- (v) Adopting a more conservative approach than those set out above when the cash flow structure is less straight forward and such a calculation may be complex (eg assuming high parameters in the examples above or discounting at the risk-free rate).

Calculations for Transactions A to D are set out below, illustrating the options of using a risk-free discount rate and a risky discount rate where appropriate.¹¹ Where a risky discount rate is used, the discounting assumes no amortisation (ie $E(CPR)$ is set to zero) and 80% LGD in respect of the position or pool (where relevant). In each example the applicable RWA is shown as Day 1 RWA, inclusive of that arising from the retained senior tranche (for transactions C and D).

The formula for calculating the cumulative present value is:

$$PV = \sum_{i=1}^m \frac{P}{(1+r)^i}$$

Where:

"*r*" is the applicable discount rate;

"*i*" indicates the period;

"*m*" is the maturity of the position; and

"*P*" is the annual contractual premium.

¹⁰ Throughout this guidance where $E(LGD)$ is defined supervisors may specify in greater detail how it should be calculated by firms.

¹¹ In all tables in this guidance the numbers presented may not match the formulae shown due to rounding.

Example 1 – Transaction A: Contingent premium

Option 1: Supervisory choice (i) – risk-free rate in all circumstances

Year	1	2	3	4	5
Position	100.0	100.0	100.0	100.0	100.0
Contractual Premium	1.00	1.00	1.00	1.00	1.00
Risk-free PV (2%) of Premium	0.98	0.96	0.94	0.92	0.91
Sum Risk-free PV Premium	4.71				
RWA before Protection	200.00				
RWA after Protection (Risk-free PV)	58.92	(= 4.71 x 1250%)			

Option 2: Supervisory choice (ii) – risky discount rate

Year	1	2	3	4	5
Position	100.0	100.0	100.0	100.0	100.0
Contractual Premium	1.00	1.00	1.00	1.00	1.00
Risky PV (1%/80% + 2%) of Premium	0.97	0.94	0.91	0.88	0.85
Sum Risky PV Premium	4.55				
RWA before Protection	200.00				
RWA after Protection (Risky PV)	56.84	(= 4.55 x 1250%)			

Example 2 – Transaction B: Non-contingent premium (ie no choice is made by the supervisor; the risk-free rate is applied)

Year	1	2	3	4	5
Position	100.0	100.0	100.0	100.0	100.0
Contractual Premium (FV)	1.02	1.04	1.06	1.08	1.10
Risk-free PV (2%) of Premium	1.00	1.00	1.00	1.00	1.00
Sum Risk-free PV Premium	5.00				
Initial RWA	200.00				
RWA after Protection (Risk-free PV)	62.50	(= 5.00 x 1250%)			

Note: In Example 2 it is assumed that the upfront premium can be amortised over 5 years and so is not immediately recognised in earnings. As the premium is payable upfront a future value is calculated and subsequently discounted. As in all cases, if the protection costs are immediately recognised in earnings then no additional retained position arises.

Example 3 – Transaction C: Contingent premium

Option 1: Supervisory choice (i) – risk-free rate in all circumstances

Year	1	2	3	4	5
Contractual Premium	2.00	2.00	2.00	2.00	2.00
Risk-free PV (2%) of Premium	1.96	1.92	1.88	1.85	1.81
Sum Risk-free PV Premium	9.43				
RWA before securitisation	200.00				
RWA after securitisation (Risk-free PV)	124.14 (= 9.43 * 1250% + 90 * 7%)				

Option 2: Supervisory choice (ii) – risky discount rate

Year	1	2	3	4	5
Contractual Premium	2.00	2.00	2.00	2.00	2.00
Risky PV (20% + 2%) of Premium	1.64	1.34	1.10	0.90	0.74
Sum Risky PV Premium	5.73				
RWA before securitisation	200.00				
RWA after securitisation (Risky PV)	77.89 (= 5.73 * 1250% + 90 * 7%)				

Example 4 – Transaction D: Non-contingent premium (ie no choice is made by the supervisor; the risk-free rate is applied)

Year	1	2	3	4	5
Contractual Premium	1.50	1.50	1.50	1.50	1.50
Risk-free PV (2%) of Premium	1.47	1.44	1.41	1.39	1.36
Sum Expected Premium	7.07				
RWA before securitisation	200.00				
RWA after securitisation (Risk-free PV)	94.68 (= 7.07 * 1250% + 90 * 7%)				

In the above examples no capital is held against the default of the protection provider because it is assumed that this counterparty has a 0% risk weight. Example 5 shows the same situation as Example 1 (option 2) with the exception that it is assumed that counterparty had a 20% risk weight.

Example 5 – Transaction A with 20% risk weight protection provider (Single Name, Contingent Running Premium), Risky PV

Year	1	2	3	4	5
Position	100.0	100.0	100.0	100.0	100.0
Contractual Premium	1.00	1.00	1.00	1.00	1.00
Risky PV (1%/80% + 2%) of Premium	0.97	0.94	0.91	0.88	0.85
Sum Risky PV Premium	4.55				
RWA before Protection	200.00				
RWA after Protection (Risky PV)	76.84 (= 4.55 x 1250% + 100 * 20%)				

(1.2) Recognising spread income

Some supervisors may conclude that spread income could be taken into account when calculating the present value of material credit protection costs.

Where spread income would exceed credit protection costs in all circumstances supervisors may determine that it is not necessary to undertake any calculations and that the present value of material credit protection costs may be taken as zero. This may arise, for example, where a bank purchases credit protection for a loan at origination and the cost of protection is less than the spread income on the loan.

Options for treating spread income include:

- (i) Calculating credit protection costs as “present value of contractual premiums” minus “present value of contractual spread income” when premiums are considered to be contingent, and disregarding spread income otherwise.
- (ii) Calculating credit protection costs as maximum present value under any possible scenario of “premium” minus “spread income”.
- (iii) Disregarding spread income.

Supervisors may prefer option (ii) in that it ensures that any potential loss will always be treated as a retained position. Supervisors may prefer option (i) because it may be simpler and in practice there may be a low risk of premia still being payable even if spread is not received.

Where protection is purchased against multiple securitisation positions which have the same underlying pool, supervisors should ensure that any spread income recognised is not double counted. This could be achieved, for example, by treating all material securitisation positions collectively.

The terminology in the formulae for calculating the cumulative present value (PV) of credit protection costs discussed below is:

“*t*” indicates the period;

“*m*” is the maturity of the position;

“*P*” is the annual contractual premium;

“*p*” is the annual contractual credit protection costs as a proportion of the position being protected;

“*r*^{*}” is the risk-free rate;

“*S*” is annual contractual spread income;

“*s*” is the current market implied spread income¹² as a proportion of the pool of underlying assets in case of a securitisation position, or otherwise, as a proportion of the position being protected;

- For non-securitisation positions:

“*E(LGD_{position})*” is the expected percentage loss in the event of a loss occurring on the position being protected;

“*E(CPR_{position})*” is the expected annual conditional amortisation rate of the position;

$$r_{\text{premium}} = \frac{P}{E(LGD_{\text{position}})} + E(CPR_{\text{position}}) + r^* \quad ; \text{ and}$$

¹² Supervisors may wish to determine how banks should calculate market implied spread income, for example, through arm's length prices, where available.

$$r_{spread} = \frac{S}{E(LGD_{position})} + E(CPR_{position}) + r^*$$

- For securitisation positions:

" $E(LGD_{pool})$ " is the average expected percentage loss in the event of losses in the underlying assets;

" $E(CPR_{position})$ " is the expected annual conditional amortisation rate of the position;

" $E(CPR_{pool})$ " is the expected annual conditional amortisation rate of the pool of underlying assets;

$$r_{premium} = \rho + E(CPR_{position}) + r^*, \text{ and}$$

$$r_{spread} = \frac{S}{E(LGD_{pool})} + E(CPR_{pool}) + r^*$$

The formulae for calculating the present value of credit protection costs under each option are:

Option (i) where premiums are considered to be contingent

$$PV = \max \left(\left(\sum_{i=1}^m \frac{P}{(1+r_{premium})^i} \right) - \left(\sum_{i=1}^m \frac{S}{(1+r_{spread})^i} \right), 0 \right)$$

Supervisors may adopt alternative conservative discount rates in place of $r_{premium}$ and r_{spread} when using this option when premiums are considered to be contingent, as discussed earlier in this guidance.

Option (i) where premiums are not considered to be contingent

$$PV = \sum_{i=1}^m \frac{P}{(1+r^*)^i}$$

Option (ii)

$$PV = \max_{scenarios} \left(\sum_{i=1}^m \frac{\max((P-S), 0)}{(1+r_{premium})^i} \right)$$

where $\max_{scenarios}(x)$ represents the maximum of quantity x under any scenario.

Supervisors may adopt alternative conservative discount rates in place of $r_{premium}$ when using this option when premiums are considered to be contingent, and should use r^* in place of $r_{premium}$ where premiums are not considered to be contingent, as discussed earlier in this guidance.

Option (iii)

$$PV = \sum_{i=1}^m \frac{P}{(1+r_{premium})^i}$$

Supervisors may adopt alternative conservative discount rates in place of $r_{premium}$ when using this option when premiums are considered to be contingent, and should use r^* in place of $r_{premium}$ where premiums are not considered to be contingent, as discussed earlier in this guidance.

Example 6 shows the case where spread income is expected to decline due to expected losses in the portfolio of underlying assets. Nevertheless, the present value of spread income is sufficient to cover the present value of the cost of protection, and spread income would cover premiums in all circumstances since premiums are capped at spread income (similar principles apply when a single name position is being protected).¹³

Example 6 – Transaction C (Securitisation, Contingent Premium)

Year	1	2	3	4	5
Contractual Premium	2.00	2.00	2.00	2.00	2.00
Contractual Spread Income	5.00	5.00	5.00	5.00	5.00
Risky PV (20% + 2%) of Premium	1.64	1.34	1.10	0.90	0.74
Risky PV (5%/80% + 2%) of Spread Income	4.62	4.27	3.94	3.64	3.36
Sum PV Premium	5.73				
Sum PV Spread Income	19.83				
Max (Sum PV Premium - Sum PV Spread Income, 0) (used to calculate RWA under Option (i))	0.00				
Sum PV (Premium – Spread) if whole pool defaults immediately (example scenario used under Option (ii))	0.00	(no spread income is received so no premium is payable)			
RWA before securitisation	200.00				
Day 1 RWA (Option (i) and Option (ii))	6.30	(from senior tranche)			

In Example 6 since the premium is contingent and “contractual premium” less “expected spread income” is zero, no retained position arises if supervisors adopt option (i). Similarly, since spread income would offset the premium payable in all circumstances (including if the entire pool defaults immediately), no retained position arises if supervisors adopt option (ii).

An alternative option for calculating spread income to the three set out above would involve calculating credit protection costs as the present value of {“contractual premium” – “expected spread income”} in all circumstances. This is not considered to be suitably conservative, and Example 7 illustrates why this is the case.

Example 7 – Transaction D (Securitisation, Non-contingent Premium), Risk-free PV

Year	1	2	3	4	5
Contractual Premium	1.50	1.50	1.50	1.50	1.50
Contractual Spread Income	5.00	5.00	5.00	5.00	5.00
Expected Future Spread Income	1.50	1.50	1.50	1.50	1.50
Sum Risk-free PV (Contractual Premium) (disregarding spread income under Option (i) or recognising zero spread income as none received if whole pool defaults or amortises immediately under Option (ii))	7.07				
RWA before securitisation	200.00				
Day 1 RWA (Options (i), (ii) and (iii))	94.68	(= 7.07 * 1250% + 90 * 7%)			

¹³ This is the case because in this example the entire pool spread income is used. However, in some circumstances, supervisors might determine that this is not prudent and may accordingly allocate the spread income proportionally to the protected tranche, for the purposes of partially recognising the spread income.

In this example $\text{Max}(\text{“contractual premium”} - \text{“contractual spread income”}, 0)$ is zero and so a zero retained position (with an RWA of only 6.30) could be calculated based solely on expected values. A loss would still be incurred by the bank, however, if no spread income was received due to an immediate default since the premiums are still payable. In this example the maximum protection from the transaction is only 25% (due to credit protection costs of 7.5 on a tranche of 10) and so full capital relief is not justified. As such this option is not considered to be suitably conservative.

The three suggested options would all result in a retained position of 7.07 in Example 7. This is because:

- The premiums in the example are guaranteed, so in the option (i) spread income would be disregarded.
- In Option (ii), the most severe scenario is where the whole pool defaults or amortises immediately (and therefore, no spread income is received). In this case the present value of the premium minus the spread income is 7.07.
- In Option (iii) spread income is disregarded.

For non-contingent premia, Example 7 above illustrates why allowing expected spread income to fully offset contractual premiums in all cases is not considered to be appropriately conservative. In this example, whilst expected spread income is greater than contractual credit protection costs (which would result in no retained position) there are important cases where the premiums would be payable but the spread income would not be received, such as where the whole pool defaults immediately.

(2) Examples of material premia with risk-weight less than or equal to 150%

The proposed paragraph 189(b) states that:

189(b) Credit protection costs will be considered material when the risk weight on the exposure in the absence of credit protection would otherwise be greater than 150% at the time the credit protection is bought.¹⁴ Notwithstanding this threshold, national supervisors may determine that the cost of protection is material, and therefore the provision in paragraph 189(a) applies, even if the risk weight is equal to or lower than 150%. In using this discretion, national supervisors may consider a variety of factors, such as the terms and conditions of the protection contract, on a case by case basis.

This section sets out two examples where premia may be considered material even where the RW of the position being protected would be less than or equal to 150% in the absence of credit protection. These include:

- (2.1) Significant rebate mechanisms; and,
- (2.2) Securitisation of assets where market value is significantly less than book value.

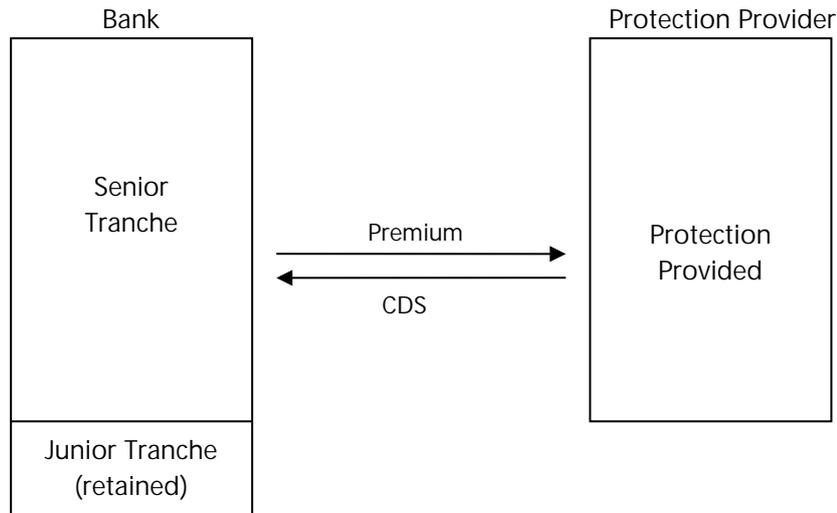
These examples are not exhaustive and supervisors may judge that premiums are material on other occasions.

(2.1) Rebate mechanism example

A rebate mechanism may take the following form:

¹⁴ When applied to securitisations, the 150% risk-weight threshold applies to the securitisation tranche and not to the risk-weight of the underlying assets.

Example 8 - Transaction with rebate



- Bank originates a portfolio of assets with book value 100.
- Assets synthetically securitised into first-loss tranche with value 10 and senior tranche with value 90.
- First-loss tranche attracts a RW of 1250% and senior tranche attracts a RW of 20%.
- First-loss tranche retained and senior tranche protected through payment of non-contingent premiums that have a present value of 89 when discounted at the risk-free rate.
- To the extent that the premium payments are not needed to cover losses they are rebated to the bank on maturity (eg if losses are 50 then a premium of 39 would be rebated to the bank).

Note: As in previous examples it is assumed for illustrative purposes that significant risk has been transferred in accordance with paragraph 555 of the Basel framework.

In this example the value of the premiums payable is high due to the inclusion of the rebate mechanism in the deal structure. If credit protection costs are considered material under paragraph 189(b), since the premiums are non-contingent, a retained position of 89 subject to a 1250% risk weight would result.

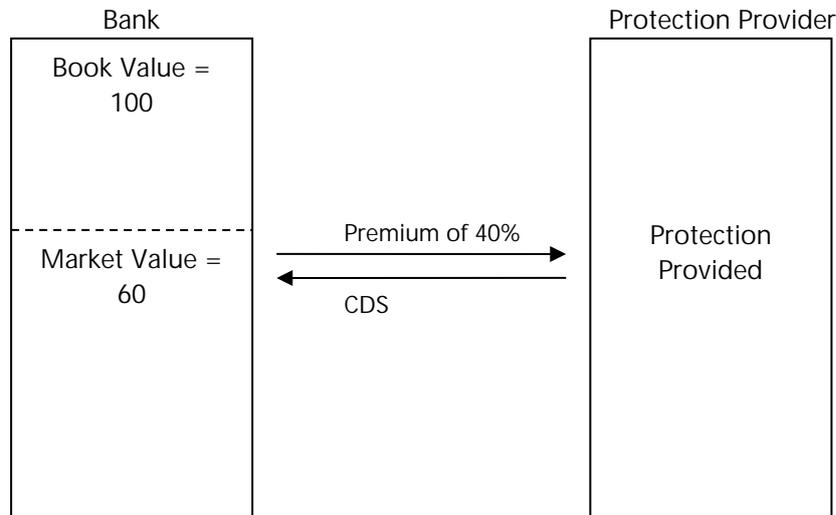
There is extremely limited transfer of risk in this transaction. But if the initial capital requirement on the underlying positions exceeds 10 (the capital requirement held against the junior position) then an opportunity for capital arbitrage would exist as the bank could benefit from a reduction in risk-weighted assets if credit protection costs were not treated as a retained position. This is because it would be able to utilise securitisation RWs in respect of its retained position and would not need to hold capital in respect of its protected positions, despite the fact that virtually no real protection is being provided. For this reason supervisors may consider that the premium should be considered material.

In this particular example the transaction would be unlikely to qualify for significant risk transfer, but analogous transactions with more risk transfer could still be problematic. For example, even if the present value of the premiums were 45 then the bank would have effectively protected only half of the second loss tranche despite claiming full second loss protection.

(2.2) Outright protection of assets where market value is significantly less than book value

The following example illustrates this case:

Example 9 - Outright Protection, market value significantly less than book value



- Bank originates a portfolio of assets (RW less than or equal to 150%) with book value 100.
- Market value of assets falls to 60 but under accounting rules assets continue to be booked at 100 (no provisions are taken and RW remains less than or equal to 150%).¹⁵
- Bank purchases protection, paying non-contingent premiums that have a present value of 40% of book value of assets.

In this example the bank has replaced its exposure to the underlying pool of assets with a certain loss of 40 as a result of credit protection cost payments. It is in a very similar position to if it had sold the assets and recognised a loss of 40. In such circumstances, supervisors may consider that treating the cost of 40 for credit protection as a retained position subject to a 1250% RW would be appropriate even though the RW of the protected position is less than or equal to 150%.

In cases where the difference between market value and book value is small (eg less than the premium paid) supervisors may determine that credit protection costs do not need to be considered material where the RW of the protected position is less than or equal to 150%.

(3) Examples of significant risk transfer assessments

Under paragraphs 554 and 555 of the Basel framework significant credit risk associated with securitised exposures must have been transferred to third parties if the securitised exposures are to be excluded from the calculation of RWA.

¹⁵ This example tries to illustrate cases observed in recent years, where the market has severely discounted assets even in the absence of an "impairment event" and where assets have not necessarily been marked down in such circumstances (eg if held on a held-to-maturity basis).

The proposed rules state that: "Banks must incorporate in this assessment the cost of credit protection purchased in the form of a guarantee or credit derivative that is considered material and therefore a retained position under paragraph 189(a). For transactions where a bank has not transferred significant credit risk through the purchase of credit protection, paragraph 189(a) with regard to the present value of the cost of protection will not apply."

The retained position calculated under paragraph 189(a) should be incorporated when assessing significant risk transfer (SRT). The way to do so may differ depending on the approach adopted by the supervisor to assess SRT.¹⁶

(4) Treatment of losses already recognised in earnings

As set out above, paragraph 189(a) of the amended accord will state that

A bank must calculate the present value of material credit protection costs (as recognised in 189(b)) in an appropriately conservative manner if such costs have not been recognised in earnings, or otherwise recognised in Common Equity Tier 1. The present value should be treated as an exposure of the bank and be assigned a 1250% risk weight.

Therefore, to the extent that a bank can demonstrate that credit protection costs have already been recognised in earnings there is no need for them to be treated as a retained position.

Examples where supervisors may judge that this has occurred include, but are not limited to, the following cases.

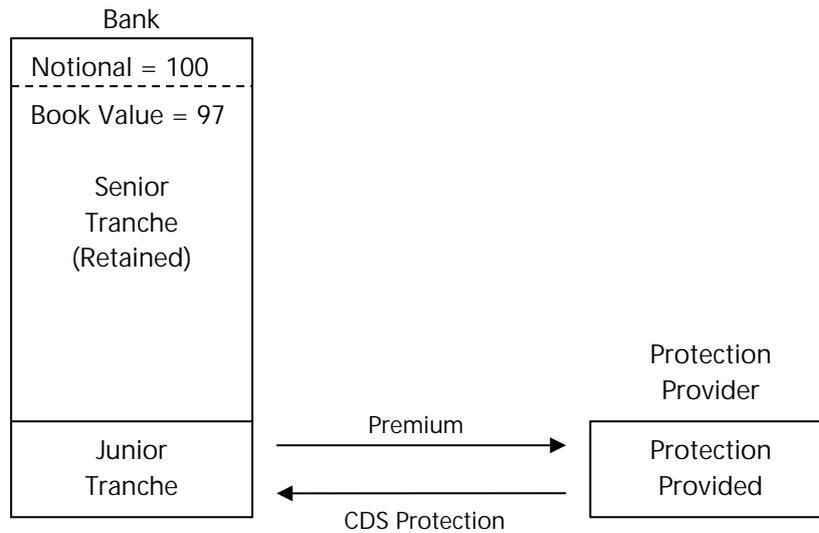
- Sufficient accounting provisions have been taken against the hedged position to account for the full credit protection cost.
- The hedged assets are market valued on balance sheet and the mark to market has reduced by an amount greater than or equal to the credit protection costs, so credit protection costs are already taken into account.

It should be noted that costs are only to be considered as recognised in earnings if the relevant value adjustments have not been applied by the firm elsewhere to reduce risk-weighted exposure amounts.

If the write downs are less than the credit protection costs, then the write downs could reduce the amount to which a 1250% RW is assigned. This is illustrated in the example below.

¹⁶ In jurisdictions where mechanistic tests are used to assess SRT (eg those in the European Union), supervisors may determine that it is appropriate to treat the retained position calculated under paragraph 189(a) as being a retained securitisation position subject to a 1250% RW when applying the relevant SRT test.

Example 10 - Assets written down



- Bank originates assets that have principal notional value of 100.
- The bank writes the assets down to 97 through credit provisions.
- Bank synthetically securitises assets into a first loss tranche with principal notional value of 10 and senior tranche with principal notional value of 90.
- The bank buys protection against the first loss tranche and retains exposure to the senior tranche.
- Present value of total credit protection costs is 5.

In this example the bank has already taken into account a loss of 3 due to credit provisions, so it would only need to treat the remaining credit protection costs (which have a present value of 2) as a retained position subject to a 1250% RW.

(5) Treatment of maturity mismatches

The requirement to recognise the cost of credit protection as a retained position which is set out in paragraph 189(a) is intended to reduce opportunities for capital arbitrage, however supervisors may wish to consider whether banks would be inappropriately incentivised to purchase shorter maturity protection relative to the maturity of the position that is being protected.

Some supervisors may consider that the adjustment to the value of protection where this is a maturity mismatch which is set out in paragraphs 202-205 is sufficient and that no additional adjustment is required in cases where credit protection costs are considered to be material. Other supervisors may determine that it is appropriate to make an adjustment in such circumstances. The approaches supervisors could take include:

1. Make no adjustment for maturity.
2. Amending any retained position calculated under paragraph 189(a) by extending the time horizon over which credit protection costs are calculated.
3. Amending the adjusted value of credit protection calculated in accordance with paragraph 205 (maturity mismatch) by removing the cap of 5 years in the formula for protected positions which are considered material according to the proposed paragraph 189.

Approach 1 is the “default case” without making any additional adjustment beyond that required by the Pillar 1 text. Supervisors may consider that no change is necessary given that the existing provisions in the framework allow the reduction in RWA where positions have a maturity mismatch and the fact that the new proposed text on premiums does not change this.

Approaches 2 and 3 reduce the incentives for banks to buy credit protection with a maturity mismatch. Supervisors may consider that this incentive would otherwise be relatively increased by the new proposed text which would require banks to hold capital against the credit protection premium, and some supervisors may therefore wish to reduce this incentive. Approach 2 says that when calculating the credit protection costs in an appropriately conservative manner, where there is a maturity mismatch supervisors may consider an additional implied premium to cover the maturity mismatch. However, other supervisors may consider that this is not necessary given that the additional implied premiums will not actually be paid and that maturity mismatch is already taken into account.

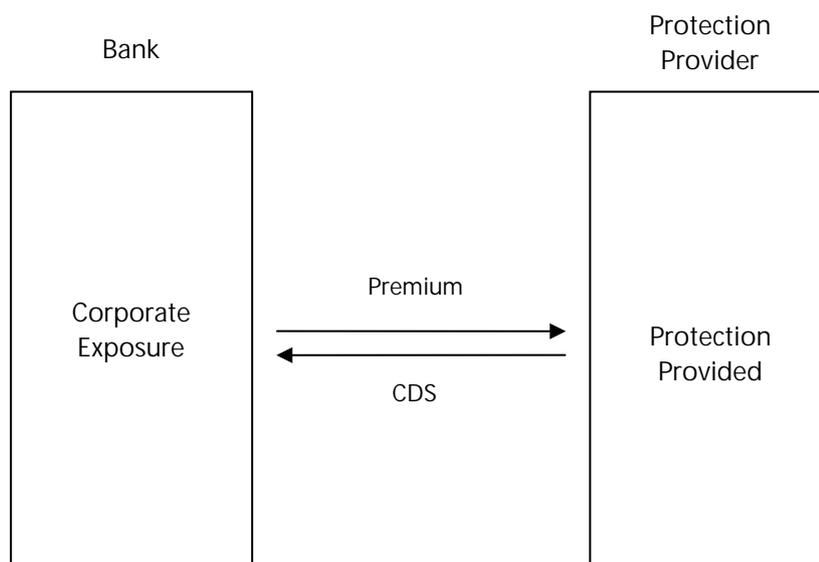
Approach 3 says that supervisors may adjust the formula for calculating RWA adjustment arising from maturity mismatch. This would have no effect where the protected position has a maturity of 5 years or less (even if there is a maturity mismatch) but for positions longer than 5 years, the adjusted formula would calculate an RWA adjustment arising from maturity mismatch in a similar way as for positions with a maturity of less than 5 years. So a position with a 10 year maturity, when protected by a 5 year transaction, could gain about 50% RWA reduction instead of 100% RWA reduction.

Where Approach 2 is applied, supervisors may require credit protection costs to be extended to the maturity of the exposure by extrapolating on a straight line basis to the actual maturity of the exposure (so the protection costs per annum for the extended premium are assumed to be the same as the protection costs per year for the premium itself). Supervisors may also permit or require alternative extrapolation techniques (which may involve drawing inferences from market prices) where this is considered to be suitably conservative.

Where Approach 3 is applied, the parameter “T” in paragraph 205 should be defined as the residual maturity of the exposure, without applying a cap at 5 years.

The three approaches for dealing with maturity mismatches are illustrated using the example below.

Example 11 - Single Name Protection with a maturity mismatch



- Bank holds single name corporate bond which has book value 100 and maturity of 10 years.

- Corporate bond attracts a risk weight of 200% (via an IRB approach), giving risk-weighted assets of 200.
- Bank buys a CDS with maturity of 3 years against the bond issuer from a 0% risk-weight counterparty.
- CDS has a running premium of 100bp per annum and no upfront premium.

In this example credit protection costs are extrapolated on a straight line basis under Approach 2, any spread income is disregarded and a risk-free PV is shown under all approaches (supervisors could alternatively use a "risky" PV in this case).

Single Name CDS Protection, Running Premium, Risk-Free PV, Maturity Mismatch

Year	1	2	3	4	5	6	7	8	9	10
Position	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Contractual Premium	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Risk Free PV (2%) of Premium	0.98	0.96	0.94	0.92	0.91	0.89	0.87	0.85	0.84	0.82
Sum PV Premium (3 years)	2.88									
Sum PV Premium (10 years)	8.98									
Initial RWA	200.00									
RWA After Protection (Approach 1 - no adjustment)	120.26 = $[100 - 100 * (3 - 0.25 / 5 - 0.25)] * 200\% + 2.88 * 1250\%$									
RWA After Protection (Approach 2)	196.49 = $[100 - 100 * (3 - 0.25 / 5 - 0.25)] * 200\% + 8.98 * 1250\%$									
RWA After Protection (Approach 3)	179.64 = $[100 - 100 * (3 - 0.25 / 10 - 0.25)] * 200\% + 2.88 * 1250\%$									

In this example if no adjustment is made, risk-weighted assets would be 120.26. Under Approach 2 the time horizon of credit protection costs is extended to 10 years giving a retained position of 8.98, resulting in total risk-weighted assets of 196.49. Under Approach 3 no direct adjustment is made to the retained position; however, the value of credit protection is reduced by dis-applying the 5 year cap in the relevant formula. This causes total risk-weighted assets to increase to 179.64.