Annex IIIb-A

Illustrations on Reporting of Recognized Credit Risk Mitigation

All monetary figures in HK$ million unless otherwise stated.

Case 1: On-balance sheet exposure – collateralized loan

- Exposure: A 5-year term loan of $1,000 to an unrated corporate incorporated in Hong Kong.
- Collateral: Debt securities that are–
  - — issued by a bank;
  - — denominated in Euro;
  - — rated AA by the Standard & Poor's; and
  - — maturing in 7 years.
- The collateral is subject to daily revaluation and presently has a market value of $1,050.

Simple Approach

1. Calculation of Risk-weighted Amount

- Exposure: Applicable risk-weight (RW) is 100% (see §61(4) of the BCR).
- Collateral: An AA-rating is mapped to a RW of 20% (see §59 (Table 3) of, and Table B in Schedule 6 to, the BCR).
- Credit protection covered portion: $1,000
- Credit protection uncovered portion: $0
- RWA of the loan calculated by substituting the RW of the corporate with the RW of the collateral: $1,000 × 20% = $200

2. Reporting Arrangement

Division A

(in HK$'000)

Item	Nature of item	On-balance sheet exposures: Principal Amount (A1)	On-balance sheet exposures: Principal Amount after CRM (A2)	Off-balance sheet exposures: Principal Amount / Notional Amount (A3)	Off-balance sheet exposures: Credit Equivalent Amount after CRM (A4)	Off-balance sheet exposures: Default Risk Exposure after CRM (A5)	Risk-weight % (A6)	Risk-weighted Amount (A7) = (A2+A4+A5) x A6
Class IV	**Bank Exposures**							
7a.	Exposures with original maturity of more than three months:							
7a(i).	Risk-weight 20%	0	1,000,000				20	200,000
7a(ii).	Risk-weight 50%						50	
7a(iii).	Risk-weight 100%						100	
7a(iv).	Risk-weight 150%						150	
	SUBTOTAL	**0**	**1,000,000**					**200,000**
Class VI	**Corporate Exposures**							
9a.	Risk-weight 20%						20	
9b.	Risk-weight 30%						30	
9c.	Risk-weight 50%						50	
9d.	Risk-weight 100%	1,000,000	0				100	0
9e.	Risk-weight 150%						150	
	SUBTOTAL	**1,000,000**	**0**					**0**

Comprehensive Approach

1. Calculation of Risk-weighted Amount

- Standard supervisory haircut applicable to the collateral: 8% (see item 2 in Part 1 of the Table in Schedule 7 to the BCR).
- Standard supervisory haircut for currency mismatch: 8% (see item 2 in Part 3 of the Table in Schedule 7).
- As the above standard supervisory haircuts only assume a 10-day holding period, they have to be scaled up to haircuts for 20-day holding period (which is the minimum holding period assumed for secured lending transactions) using Formula 5A in §91(3) of the BCR and Formula 33 in §3 of Schedule 7:

$$H = H_{10} \times \sqrt{\frac{N_R + (T_M - 1)}{10}} = 8\% \times \sqrt{\frac{1 + (20 - 1)}{10}} = 11\%$$

- The exposure after CRM (E*) is calculated by using Formula 2 in §87 of the BCR:

$$E^* = \max\{0, [E \times (1 + H_e) - C \times (1 - H_c - H_{fx})]\}$$
$$= \max\{0, [1{,}000 \times (1 + 0\%^{1}) - 1{,}050 \times (1 - 11\% - 11\%)]\}$$

[1] As the lending involves only cash, no haircut is required for the loan exposure (i.e. He = 0).

= max (0, 181)
= 181

- RWA of the loan = E* × risk-weight of the unrated corporate
  = 181 × 100%
  = 181

2. Reporting Arrangement

Division A

(in HK$'000)

Item	Nature of item	On-balance sheet exposures: Principal Amount (A1)	On-balance sheet exposures: Principal Amount after CRM (A2)	Off-balance sheet exposures: Principal Amount / Notional Amount (A3)	Off-balance sheet exposures: Credit Equivalent Amount after CRM (A4)	Off-balance sheet exposures: Default Risk Exposure after CRM (A5)	Risk-weight % (A6)	Risk-weighted Amount (A7) = (A2+A4+A5) x A6
Class VI	Corporate Exposures							
9a.	Risk-weight 20%						20	
9b.	Risk-weight 30%						30	
9c.	Risk-weight 50%						50	
9d.	Risk-weight 100%	1,000,000	181,000				100	181,000
9e.	Risk-weight 150%						150	
	SUBTOTAL	1,000,000	181,000					181,000

Case 2: Off-balance sheet exposure - collateralized loan commitment

Now assuming that the corporate borrower in Case 1 has not yet drawn down the loan facility and the facility has an original maturity of 2 years (i.e. the borrower has to draw down the loan within 2 years). It is also assumed that the loan facility cannot be cancelled by the AI unconditionally.

Simple approach

1. Calculation of Risk-weighted Amount

- CCF applicable to a commitment with an original maturity over 1 year: 50% (see item 9(b) of Table 10 in §71(1) of the BCR).
- CEA of the commitment = $1,000 × 50% = $500
- RWA of the commitment (with the RW of the corporate replaced by the RW of the collateral): $500 × 20% = $100

2. Reporting Arrangement

Division A

(in HK$'000)

		On-balance sheet exposures		Off-balance sheet exposures				
Item	Nature of item	Principal Amount (A1)	Principal Amount after CRM (A2)	Principal Amount / Notional Amount (A3)	Credit Equivalent Amount after CRM (A4)	Default Risk Exposure after CRM (A5)	Risk-weight % (A6)	Risk-weighted Amount (A7) = (A2+A4+A5) x A6
Class IV	Bank Exposures							
7a.	Exposures with original maturity of more than three months:							
7a(i).	Risk-weight 20%			0	500,000		20	100,000
7a(ii).	Risk-weight 50%						50	
7a(iii).	Risk-weight 100%						100	
7a(iv).	Risk-weight 150%						150	
	SUBTOTAL			0	500,000			100,000
Class VI	Corporate Exposures							
9a.	Risk-weight 20%						20	
9b.	Risk-weight 30%						30	
9c.	Risk-weight 50%						50	
9d.	Risk-weight 100%			1,000,000	0		100	0
9e.	Risk-weight 150%						150	
	SUBTOTAL			1,000,000	0			0

Division B - I

(in HK$'000)

Item	Nature of item	Credit Conversion Factor % (B1)	Total Principal Amount (net of specific provisions) (B2)	Total Credit Equivalent Amount (B3)	Out of which: Sovereign exposures (B4)	Corporate exposures (B9)	CIS exposures (B10)	Regulatory retail exposures (B11)	Residential mortgage loans (B12)
9a.	Commitments that are unconditionally cancellable without prior notice	0		0	0	0	0	0	0
9b.	Other commitments (CCF at 20%)	20							
9c.	Other commitments (CCF at 50%)	50	1,000,000	500,000		500,000			
10.	Off-balance sheet exposures not specified above								
10a.		100							
10b.									
10c.									
10d.									
	SUBTOTAL		1,000,000	500,000		500,000			

Comprehensive Approach

1. Calculation of Risk-weighted Amount

- The standard supervisory haircuts for both the collateral and the currency mismatch are scaled up from 8% to 11% (as shown in Case 1 above).
- The CEA after CRM (E*) is calculated by using Formula 3 in §88 of the BCR:

$$\begin{aligned} E^* &= \max\{0, [E \times (1 + H_e) - C \times (1 - H_c - H_{fx})]\} \times CCF \\ &= \max\{0, [1{,}000 \times (1 + 0\%) - 1{,}050 \times (1 - 11\% - 11\%)]\} \times 50\% \\ &= 90.5 \end{aligned}$$

- RWA of the loan commitment $= E^* \times$ risk-weight of the unrated corporate
  $= 90.5 \times 100\%$
  $= 90.5$

2. Reporting Arrangement

Division A

(in HK$'000)

Item	Nature of item	On-balance sheet exposures: Principal Amount (A1)	On-balance sheet exposures: Principal Amount after CRM (A2)	Off-balance sheet exposures: Principal Amount / Notional Amount (A3)	Off-balance sheet exposures: Credit Equivalent Amount after CRM (A4)	Off-balance sheet exposures: Default Risk Exposure after CRM (A5)	Risk-weight % (A6)	Risk-weighted Amount (A7) = (A2+A4+A5) x A6
Class VI	**Corporate Exposures**							
9a.	Risk-weight 20%						20	
9b.	Risk-weight 30%						30	
9c.	Risk-weight 50%						50	
9d.	Risk-weight 100%			1,000,000	90,500		100	90,500
9e.	Risk-weight 150%						150	
	SUBTOTAL			**1,000,000**	**90,500**			**90,500**

Division B – I

(in HK$'000)

Item	Nature of item	Credit Conversion Factor % (B1)	Total Principal Amount (net of specific provisions) (B2)	Total Credit Equivalent Amount (B3)	Out of which: Sovereign exposures (B4)	Corporate exposures (B9)	CIS exposures (B10)	Regulatory retail exposures (B11)	Residential mortgage loans (B12)
9a.	Commitments that are unconditionally cancellable without prior notice	0		0	0	0	0	0	0
9b.	Other commitments (CCF at 20%)	20							
9c.	Other commitments (CCF at 50%)	50	1,000,000	500,000		500,000			
10.	Off-balance sheet exposures not specified above								
10a.		100							
10b.									
10c.									
10d.									
	SUBTOTAL		**1,000,000**	**500,000**		**500,000**			

Case 3: Collateralized derivative contract covered by recognized guarantee

- Interest rate contract with a notional of $1,000 with a four-year residual maturity.
- Not subject to margin agreement and netting agreement.
- The counterparty is an unrated corporate.
- The contract is covered by a guarantee of $8 provided by a bank with an "A1" Moody's rating.
- It is assumed that the replacement cost and potential future exposure of the contract calculated under the SA-CCR approach are $1 and $18 respectively.

1. Calculation of Risk-weighted Amount

Default risk exposure in respect of the interest rate contract is calculated as follows:

$$Default\ \ Risk\ \ Exposure = alpha * (RC + PFE) = 1.4 * (1 + 18) = 26.6$$

- RW applicable to the bank guarantee: 50%.
- RWA of credit protection covered portion = $8 × 50% = $4
- RWA of credit protection uncovered portion = ($26.6 - $8) × 100% = $18.6
- Total RWA = $4 + $18.6 = $ 22.6

2. Reporting Arrangement

Division A

(in HK$'000)

Item	Nature of item	On-balance sheet exposures		Off-balance sheet exposures			Risk-weight %	Risk-weighted Amount
		Principal Amount (A1)	Principal Amount after CRM (A2)	Principal Amount / Notional Amount (A3)	Credit Equivalent Amount after CRM (A4)	Default Risk Exposure after CRM (A5)	(A6)	(A7) = (A2+A4+A5) x A6
Class IV	**Bank Exposures**							
7a.	Exposures with original maturity of more than three months:							
7a(i).	Risk-weight 20%						20	
7a(ii).	Risk-weight 50%			0		8,000	50	4,000
7a(iii).	Risk-weight 100%						100	
7a(iv).	Risk-weight 150%						150	
	SUBTOTAL			**0**		**8,000**		**4,000**
Class VI	**Corporate Exposures**							
9a.	Risk-weight 20%						20	
9b.	Risk-weight 30%						30	
9c.	Risk-weight 50%						50	
9d.	Risk-weight 100%			1,000,000		18,600	100	18,600
9e.	Risk-weight 150%						150	
	SUBTOTAL			**1,000,000**		**18,600**		**18,600**

Division B - II

(in HK$'000)

Item	Nature of item							
11.	Unmargined contracts not covered by recognized netting							
						Out of which:		
	Type of Contract	Total Notional Amount (B13)	Total Replacement Cost (B14)	Total Potential Future Exposure (B15)	Total Default Risk Exposure (B16)	Sovereign exposures (B17)	Corporate exposures (B22)	Regulatory retail exposures (B23)
11a.	Interest rate contracts	1,000,000	1,000	18,000	26,600		26,600	
11b.	Exchange rate contracts							
11c.	Credit-related derivative contracts							
11d.	Equity-related derivative contracts							
11e.	Commodity-related derivative contracts							
	SUBTOTAL	**1,000,000**	**1,000**	**18,000**	**26,600**		**26,600**	