

Example of calculation of risk-weighted amount of default risk exposure to central counterparty

An AI, which is a clearing member of a qualifying central counterparty (QCCP), enters into a margin agreement with the QCCP under which only the AI is required to post variation margin (VM) (i.e. the agreement is a one-way margin agreement). The AI uses the SA-CCR approach to calculate default risk exposures of derivative contracts.

As of 30 June—

- the principal amount of the derivative contracts in the netting set with the QCCP is HK\$300 million;
- the AI has posted initial margin (IM) of HK\$2 million and VM of HK\$0.5 million to the QCCP; and
- the haircut applicable to the IM is 5% while the haircut applicable to the VM is 0%.

I. Calculation of risk-weighted amount of default risk exposures (all monetary figures are expressed in HK\$'000 unless otherwise specified)

Since a one-way margin agreement is not a variation margin agreement as defined in section 226BA of the BCR, derivative contracts covered by a one-way margin agreement is treated as unmargined contracts (see paragraph (a) of the definition of “unmargined contracts” in section 226BA). Hence, the default risk exposure of the netting set with the QCCP must be calculated in accordance with section 226BC of the BCR.

1. Calculation of RC

Under section 226BC, RC is calculated by using Formula 23AB as follows:

$$RC = \max(V - C; 0)$$

- (a) The AI determines that the current mark-to-market value (V) of the netting set is +3000; and

(b) C (i.e. the haircut value of net collateral held for the netting set by the AI) is calculated in accordance with section 226BC(4) of the BCR as follows:

(i) haircut value of VM posted (calculated under section 226BJ(4)) = $500 \times (1 + 0\%) = 500$

(ii) NICA (calculated under section 226BJ(3)) = $0 - 2000 \times (1 + 5\%) = -2100$

(iii) C = $-2100 - (500) = -2600$

(c) therefore, RC = $3000 - (-2600) = 5600$

2. Calculation of potential future exposure (PFE)

The AI determines that the PFE of the netting set, as calculated in accordance with section 226BR(1) of the BCR, is HK\$10 million.

3. Calculation of default risk exposure

The default risk exposure to the QCCP = $1.4 \times (RC + PFE)$
 $= 1.4 \times (5600 + 10000)$
 $= \mathbf{21840}$

II. Reporting Arrangement

Part IIIe

(in HK\$'000)

Division B: Default Risk Exposures

Clearing member's exposures							
	Derivative Contracts and SFTs			Collateral posted		Risk-weight % (B6)	Risk-weighted Amount (B7)
	Principal Amount (B1)	Non-IMM(CCR) Default Risk Exposure (B2)	IMM(CCR) Default Risk Exposure (B3)	Principal Amount (B4)	Total Exposure After CRM (B5)		
1.	Qualifying CCPs						
1a.	Risk-weight 0%						
1b.	Risk-weight 2%	300,000	21,840		21,840	2	437
1c.	Other risk-weights not specified above						
2.	Non-qualifying CCPs						
2a.	Risk-weight 0%						
	SUBTOTAL	300,000	21,840		21,840		437