(ii) reference an entity legally related to the counterparty, where legally related refers to cases where the reference name and the counterparty are either a parent and its subsidiary or two subsidiaries of a common parent; or

(iii) reference an entity that belongs to the same sector and region as the counterparty.

20. A bank that uses the full version of BA-CVA shall also calculate $\mathrm{K}_{\mathrm{reduced}}$ as provided in paragraph 14 of these Directions. The capital requirements for CVA risk under the full version of BA-CVA is calculated using the following formula:

$$CVA_{full} = DS \times K_{full}$$

Where,

DS is the discount scalar = 0.65; and

$\mathrm{K}_{\mathrm{full}}$ is calculated as provided in paragraph 21 of these Directions.

21. A bank shall compute $\mathrm{K}_{\mathrm{full}}$ using the following formula:

$$K_{full} = \beta * K_{reduced} + (1 - \beta) * K_{hedged}$$

Where,

(i) β=0.25, is the supervisory parameter used to provide a floor that limits the extent to which hedging can reduce the capital requirements for CVA risk;

(ii) $\mathrm{K}_{\mathrm{reduced}}$ is calculated as provided in paragraph 14 of these Directions; and

(iii) $\mathrm{K}_{\mathrm{hedged}}$ is the part of the capital requirements that recognises eligible hedges, and is calculated as prescribed in paragraph 22 of these Directions.

22. A bank shall compute $\mathrm{K}_{\mathrm{hedged}}$ using the following formula:

$$K_{hedged} = \sqrt{\left(\rho * \sum_{C}(SCVA_C - SNH_C) - IH\right)^2 + (1 - \rho^2) * \sum_{C}(SCVA_C - SNH_C)^2 + \sum_{C} HMA_C}$$

Where,

(i) the summations shall be taken over all counterparties c that are within the scope of the CVA charge;

(ii) The first term, $(\rho * \sum_C(\mathrm{SCVA_C} - \mathrm{SNH_C}) - \mathrm{IH})^2$, aggregates the systematic components of CVA risk arising from the bank's counterparties, single-name hedges and index hedges;

(iii) The second term, $(1 - \rho^2) * \sum_C(\mathrm{SCVA_C} - \mathrm{SNH_C})^2$, aggregates the idiosyncratic components of CVA risk arising from the bank's counterparties and single-name hedges;

(iv) The third term $\sum_C \mathrm{HMA_C}$ aggregates the components of indirect hedges that are not aligned with counterparties' credit spreads;

(v) ρ is the supervisory correlation parameter, prescribed under paragraph 14(iii) of these Directions;

(vi) $\mathrm{SCVA_C}$ is the stand-alone CVA capital requirement for counterparty c, to be calculated as under paragraph 15 of these Directions;

(vii) SNH_C is a quantity that gives recognition to the reduction in CVA risk of the counterparty c arising from the bank's use of single-name hedges of credit spread risk and shall be calculated as prescribed in paragraph 23 of these Directions;

(viii) IH is a quantity that gives recognition to the reduction in CVA risk across all counterparties arising from the bank's use of index hedges and to be calculated as prescribed in paragraph 24 of these Directions;

(ix) HMA_C is a quantity characterising hedging misalignment, which is designed to limit the extent to which indirect hedges can reduce capital requirements given that they will not fully offset movements in a counterparty's credit spread. In other words, with indirect hedges present, K_{hedged} cannot reach zero and shall be calculated as prescribed in paragraph 25 of these Directions.

23. A bank shall compute $\mathrm{SNH_C}$ using the following formula:

$$SNH_C = \sum_{h \epsilon c} r_{hc} * RW_h * M_h^{SN} * B_h^{SN} * DF_h^{SN}$$

Where,

(i) the summation is across all single name hedges h that the bank has taken out to hedge the CVA risk of counterparty c;

r_{hc} is the supervisory prescribed correlation between the credit spread of counterparty c and the credit spread of a single-name hedge h of counterparty c. The value of r_{hc} is set out in the **Table 2** below. The value of r_{hc} is set at 100 per cent if the hedge directly references the counterparty c and set at lower values if it does not.

(ii) RW_h is the supervisory risk weight of single-name hedge h that reflects the volatility of the credit spread of the reference name of the hedging instrument. These risk weights are based on a combination of the sector and the credit quality of the reference name of the hedging instrument as prescribed in **Table 1** under paragraph 16 of these Directions.

(iii) M_h^{SN} is the remaining maturity of single-name hedge h.

(iv) B_h^{SN} is the notional of single-name hedge h. For single-name contingent CDS, the notional is determined by the current market value of the reference portfolio or instrument. A bank is currently not permitted to engage in single-name contingent CDS.

(v) DF_h^{SN} is the supervisory discount factor, which shall be calculated using the following formula:

$$DF_h^{SN} = \frac{1 - e^{-0.05 * M_h^{SN}}}{0.05 * M_h^{SN}}$$

Table 2 - Supervisory prescribed correlations between credit spread of counterparty and single-name hedge (r_{hc})

Sl. No.	Type of relation between single-name hedge h of counterparty c	Value of r_{hc}
1	In cases where the single-name hedge h references counterparty c directly	100%
2	In cases where the single-name hedge h has legal relation with counterparty c	80%
3	In cases where the single-name hedge h shares sector and region with counterparty c	50%

24. A bank shall calculate IH using the following formula:

$$IH = \sum_i RW_i * M_i^{ind} * B_i^{ind} * DF_i^{ind}$$