

Regulatory real estate exposure secured by both residential properties and commercial properties - Illustrations of LTV calculations based on valuations or floor areas

Case 1: A single loan secured by a pool of residential units and commercial units in different locations

- ◆ Exposure: A single loan of HKD 160 mil. to a corporate that is secured by a pool of 26 properties comprises both residential units and commercial units (all for rental) in 10 different locations on Hong Kong Island. The valuations of the units at the time of the origination of the loan are as follows:

| Properties | Total valuation (in HKD mil.) |
|----------------------|--|
| 11 residential units | 88.8 |
| 7 office units | 135.0 |
| 8 shop units | 156.0 |
| Total: | 379.8 |

- ◆ The source of income of the corporate is in Hong Kong dollar.

1. Calculation of Risk-weighted Amount

The loan is split into a residential real estate exposure and a commercial real estate exposure according to the proportion determined based on the respective total valuation of each type of property.

| Properties | Total valuation (in HKD mil.) | Proportion |
|----------------------|--|-------------------|
| 11 residential units | 88.8 | 23.4% |
| 15 commercial units | 291.0 | 76.6% |
| Total: | 379.8 | 100% |

Regulatory residential real estate (RRE) exposures that are not non-IPRE exposures

$$\text{Loan amount} = 160 \times 23.4\% = 37.44$$

$$\text{LTV} = \frac{37.44}{88.8} = 42.2\%$$

Risk-weight: 30% (see Table 7 of BCR §65B(3))

$$\text{RWA (regulatory RRE)} = 37.44 \times 30\% = \mathbf{11.232 \text{ mil.}}$$

Regulatory commercial real estate (CRE) exposures that are not non-IPRE exposures

$$\text{Loan amount} = 160 \times 76.6\% = 122.56$$

$$\text{LTV} = \frac{122.56}{291} = 42\%$$

Risk-weight: 70% (see Table 9 of BCR §65C(3))

$$\text{RWA (regulatory CRE)} = 122.56 \times 70\% = \mathbf{85.792 \text{ mil}}$$

2. Reporting Arrangement

(in HK\$'000)

| Item | Nature of item | On-balance sheet exposures | | Off-balance sheet exposures | | | Risk-weight % (A6) | Risk-weighted Amount (A7) = (A2+A4+A5) x A6 |
|------------------|--|----------------------------|---------------------------------|---|---|--------------------------------------|--------------------|---|
| | | 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) | | |
| Class XIA | Regulatory Residential Real Estate Exposures | | | | | | | |
| 11a. | Not materially dependent on cash flows generated by mortgaged properties | | | | | | | |
| 11a(i). | Risk-weight 20% | | | | | | 20 | |
| ... | ... | | | | | | | |
| 11a(vi). | Risk-weight 70% | | | | | | 70 | |
| 11b. | Materially dependent on cash flows generated by mortgaged properties | | | | | | | |
| 11b(i). | Risk-weight 30% | 37,440 | 37,440 | | | | 30 | 11,232 |
| ... | ... | | | | | | | |
| 11b(vi). | Risk-weight 105% | | | | | | 105 | |
| 11c. | Unhedged credit exposures | | | | | | | |
| 11d. | Exposures subject to risk-weights specified by overseas regulators | | | | | | | |
| | SUBTOTAL | 37,440 | 37,440 | | | | | 11,232 |
| Class XIB | Regulatory Commercial Real Estate (CRE) Exposures | | | | | | | |
| 11e. | Not materially dependent on cash flows generated by mortgaged properties | | | | | | | |
| 11e(i). | Risk-weight ≤ 20% | | | | | | | |
| ... | ... | | | | | | | |
| 11e(iv). | Risk-weight > 100% | | | | | | | |
| 11f. | Materially dependent on cash flows generated by mortgaged properties | | | | | | | |
| 11f(i). | Risk-weight 70% | 122,560 | 122,560 | | | | 70 | 85,792 |
| 11f(ii). | Risk-weight 90% | | | | | | 90 | |
| 11f(iii). | Risk-weight 110% | | | | | | 110 | |
| | SUBTOTAL | 122,560 | 122,560 | | | | | 85,792 |

Case 2: A single loan secured by a whole block of composite (residential and commercial) building

- ◆ Exposure: A syndicated loan of HKD 1,690 mil. in which the reporting AI's participated amount is HKD 169 mil. (i.e. the AI's share in such loan is 10%).
- ◆ The syndicated loan is secured by a composite building comprises apartments, offices and a commercial car-parking basement (all for rental) with details as follows:

| Properties | Gross floor area (sq. m.) |
|--|--------------------------------------|
| 23 storeys of apartments | 18,100 |
| 33 storeys of offices | 66,200 |
| 3-storey commercial car-parking basement | 6,100 |
| Total: | 90,400 |

- ◆ The valuation of the whole building at the time of origination of the loan is HKD 3,380 mil. where separate valuations for the residential portion and the commercial portion of the building are not available.

1. Calculation of Risk-weighted Amount

If there is no other more relevant information (e.g. actual annual cash flows generated by, or the estimated annual rental value of, each portion of the building) that can be used as the basis for splitting the AI's participated amount in the loan into a residential real estate exposure and a commercial real estate exposure, the AI may split its participated amount according to the proportion determined based on the respective floor areas of the residential portion and the commercial portion of the building.

| Properties | Gross floor area (sq. m.) | Proportion |
|---------------------|--------------------------------------|-------------------|
| Residential portion | 18,100 | 20% |
| Commercial portion | 72,300 | 80% |
| Total: | 90,400 | 100% |

Regulatory residential real estate (RRE) exposures that are not non-IPRE exposures

Residential portion of the syndicated loan = $1690 \times 20\% = 338$

Valuation of the residential portion = $3380 \times 20\% = 676$

$$LTV = \frac{338}{676} = 50\%$$

Risk-weight: 30% (see Table 7 of BCR §65B(3))

RWA (regulatory RRE) of the AI's participated amount

$$= 338 \times 10\% \times 30\%$$

= **10.14 mil.**

Regulatory commercial real estate (CRE) exposures that are not non-IPRE exposures

Commercial portion of the syndicated loan = $1690 \times 80\% = 1352$

Valuation of the commercial portion = $3380 \times 80\% = 2704$

$$LTV = \frac{1352}{2704} = 50\%$$

Risk-weight: 70% (see Table 9 of BCR §65C(3))

RWA (regulatory CRE) of the AI's participated amount

= $1352 \times 10\% \times 70\%$

= **94.64 mil.**

2. Reporting Arrangement

(in HK\$'000)

| Item | Nature of item | On-balance sheet exposures | | Off-balance sheet exposures | | | Risk-weight % (A6) | Risk-weighted Amount (A7) = (A2+A4+A5) x A6 |
|------------------|--|----------------------------|------------------------------------|--|--|---|-----------------------|--|
| | | 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) | | |
| Class XIA | Regulatory Residential Real Estate Exposures | | | | | | | |
| 11a. | Not materially dependent on cash flows generated by mortgaged properties | | | | | | | |
| 11a(i). | Risk-weight 20% | | | | | | 20 | |
| ... | ... | | | | | | | |
| 11a(vi). | Risk-weight 70% | | | | | | 70 | |
| 11b. | Materially dependent on cash flows generated by mortgaged properties | | | | | | | |
| 11b(i). | Risk-weight 30% | 33,800 | 33,800 | | | | 30 | 10,140 |
| ... | ... | | | | | | | |
| 11b(vi). | Risk-weight 105% | | | | | | 105 | |
| 11c. | Unhedged credit exposures | | | | | | | |
| 11d. | Exposures subject to risk-weights specified by overseas regulators | | | | | | | |
| | SUBTOTAL | 33,800 | 33,800 | | | | | 10,140 |
| Class XIB | Regulatory Commercial Real Estate (CRE) Exposures | | | | | | | |
| 11e. | Not materially dependent on cash flows generated by mortgaged properties | | | | | | | |
| 11e(i). | Risk-weight ≤ 20% | | | | | | | |
| ... | ... | | | | | | | |
| 11e(iv). | Risk-weight > 100% | | | | | | | |
| 11f. | Materially dependent on cash flows generated by mortgaged properties | | | | | | | |
| 11f(i). | Risk-weight 70% | 135,200 | 135,200 | | | | 70 | 94,640 |
| 11f(ii). | Risk-weight 90% | | | | | | 90 | |
| 11f(iii). | Risk-weight 110% | | | | | | 110 | |
| | SUBTOTAL | 135,200 | 135,200 | | | | | 94,640 |