Illustrative example to calculate the applicable amount of minority interests / Additional Tier 1 and Tier 2 capital instruments issued by consolidated bank subsidiaries and held by third parties to be recognized in CET1 capital, Additional Tier 1 capital and Tier 2 capital of an authorized institution

Suppose a bank subsidiary (Bank S) issued ordinary shares, Additional Tier 1 and Tier 2 capital instruments of $100, $40 and $20 respectively, and third parties own 30% of the ordinary share, 50% of Additional Tier 1 capital instruments and 75% of Tier 2 capital instruments. If Bank S has $1,000 of total risk-weighted assets, its minimum CET1, Tier 1 and total capital requirements (including applicable buffer level[1]) are assumed to be $90, $105 and $125 (i.e. corresponding to a 9% CET1 capital ratio, 10.5% Tier 1 capital ratio and a 12.5% Total capital ratio)[2] respectively. Therefore, the applicable amount of minority interests is calculated as follows:

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Capital issued by Bank S (gross of regulatory deductions)	**Capital owned by third parties**	**Amount of minority interests** *= ((a) * (b))*	**Minimum capital ratio (incl. applicable buffer level)**	**Minimum capital requirement (incl. applicable buffer level)** *= (RWA * (d))*	**Surplus capital of subsidiary (net of deductions, if any)** *= ((a) – (e))*	**Surplus capital of subsidiary attributable to third parties** *=((f) * (b))*	**Minority interests recognized** *= ((c) – (g))*
CET1	$100	30%	$30	9%	$90	$10	$3	**$27**
AT1	$40	50%	$20					**$10.5**
Tier 1	**$140**	**35.7%**	**$50**	**10.5%**	**$105**	**$35**	**$12.5**	**$37.5**
Tier 2	$20	75%	$15					**$13.3**
Total capital	**$160**	**40.6%**	**$65**	**12.5%**	**$125**	**$35**	**$14.2**	**$50.8**
		C	**A**			**B**		

[1] Assuming buffer level applicable under section 3G of the BCR is 4.5%, consisting of 2.5% capital conservation buffer, 1% countercyclical capital buffer and 1% higher loss absorbency requirement.

[2] The three percentage figures here are for illustrative purposes only. The exact figures to be used in reality will depend on whether Bank S is locally incorporated in Hong Kong or outside Hong Kong according to Schedule 4D of the BCR.

In this example, by using the formula **[A – (B * C)]** as stipulated in paragraph 13 of the completion instructions, the amount of minority interest that can be recognized in the institution's consolidated CET1 capital is $27 (i.e. $30 – ($10 * 30%)).

Similarly, following the same formula above, the amount of Tier 1 capital instruments (including both CET1 and AT1 capital instruments) held by third parties that can be recognized in the institution's consolidated Tier 1 capital equals to $37.5 (i.e. $50 – ($35 * 35.7%)). Since $27 has been recognized in the consolidated CET1 capital of the institution, only $10.5 (i.e. $37.5 - $27) of such Tier 1 capital instruments can be included in its consolidated Additional Tier 1 capital.

The calculation of the applicable amount of Tier 2 capital instruments held by third parties to be included in an institution's Tier 2 follows the same methodology as shown above.

Deduction of investments in capital and non-capital LAC liabilities and loans, facilities or credit exposures from capital base

Annex II-B

Solo/solo-consolidated only

Deduction from CET1 capital

Investment in own CET1 capital instruments [*s.43(1)(l)*]

Reciprocal cross holdings in CET1 capital instruments issued by financial sector entities [*s.43(1)(m)*]

Capital investments in connected commercial entities (in excess of AI's 15% total capital base [*s.43(1)(n)*]

Loans; facilities or credit exposures to connected commercial entities [*s.46(1)*]

Direct holdings of CET1 capital instruments issued by financial sector entities that are members of the consolidation group [*s.43(1)(q)*]

Loans, facilities or credit exposures to connected financial sector entities [*s.46(2)*]

Insignificant LAC investments in CET1 capital instruments issued by financial sector entities not subject to section 3C consolidation [*s.43(1)(o)*]

Loans, facilities or credit exposures to connected financial sector entities [*s.46(2)*]

10% concessionary threshold applied *

Significant LAC investments in CET1 capital instruments issued by financial sector entities not subject to section 3C consolidation [*s.43(1)(p)*]

Loans, facilities or credit exposures to connected financial sector entities [*s.46(2)*]

10% concessionary threshold applied *

Deduction from AT1 capital

Investment in own AT1 capital instruments [*s.47(1)(a)*]

Reciprocal cross holdings in AT1 capital instruments issued by financial sector entities [*s.47(1)(b)*]

Anti-avoidance provisions – may be exempted from deduction if such exposures were incurred in the ordinary course of business

Direct holdings of AT1 capital instruments issued by financial sector entities that are members of the consolidation group [*s.47(1)(e) & (f)*]

Insignificant LAC investments in AT1 capital instruments issued by financial sector entities not subject to section 3C consolidation [*s.47(1)(c)*]

10% concessionary threshold applied *

Significant LAC investments in AT1 capital instruments issued by financial sector entities not subject to section 3C consolidation [*s.47(1)(d)*]

Deduction from T2 capital

Investment in own T2 capital instruments [*s.48(1)(a)*]

Reciprocal cross holdings in T2 capital instruments issued by or non-capital LAC liabilities of financial sector entities [*s.48(1)(b)*]

(i) Holdings of non-capital LAC liabilities falling within section 48A; or (ii) the portion of (i) that exceeds the AI's non-capital LAC debt resources

[as the case requires under *s.48(1)(g)*]

Direct holdings of T2 capital instruments issued by financial sector entities that are members of the consolidation group [*s.48(1)(e) & (f)*]

Insignificant LAC investments in T2 capital instruments issued by or non-capital LAC liabilities of financial sector entities not subject to section 3C consolidation [*s.48(1)(c)*]

Significant LAC investments in T2 capital instruments issued by or non-capital LAC liabilities of financial sector entities not subject to section 3C consolidation [*s.48(1)(d)*]

For any "section 2 institution" defined under s.2(1) of Schedule 4F

Insignificant LAC investments in T2 capital instruments and non-capital LAC debt liabilities that have never been designated under s.2(3)(a) of Schedule 4F

10% concessionary threshold applied *

Insignificant LAC investments in non-capital LAC debt liabilities that are currently designated under s.2(3)(a) of Schedule 4F

5% concessionary threshold applied*

Insignificant LAC investments in non-capital LAC debt liabilities that were formerly designated under s.2(3)(a) of Schedule 4F but no longer meet the conditions set out in that section

For any "section 3 institution" defined under s.3(1) of Schedule 4F

Insignificant LAC investments in T2 capital investments and non-capital LAC debt liabilities that are not currently allocated under s.3(2) of Schedule 4F

10% concessionary threshold applied *

Insignificant LAC investments in non-capital LAC debt liabilities that are currently allocated under s.3(2) of Schedule 4F

5% concessionary threshold applied*

Note:
* Amount not deducted subject to risk weighting

Regulatory Treatment of Expected Loss Provisions under Hong Kong Financial Reporting Standard 9 (HKFRS 9)

Basel Committee on Banking Supervision (BCBS) interim standard

1. The BCBS regulatory capital standard requires banks to categorize accounting provisions made into general provisions (GP) and specific provisions (SP) for the purpose of capital treatment. Authorized institutions (AIs) using the standardised approach and basic approach for credit risk can include GP as Tier 2 capital up to 1.25% of credit RWAs while SP are netted off from risk-weighted exposures. For AIs using the IRB approach, the total eligible provisions (EP) (which include all accounting provisions) are compared with the regulatory measure of expected loss (EL) calculated based on predetermined parameters. Any shortfall of EP vis-a-vis EL is deducted from CET1 capital, and any excess of EP over EL is counted as Tier 2 capital up to 0.6% of credit RWAs.

2. As an interim measure for capital adequacy purposes pending the design and development of a longer-term solution, the BCBS issued on 29 March 2017 an interim standard on the regulatory treatment of accounting provisions[3], under which the current requirement to categorise banks' provisions into GP and SP and their respective treatment for regulatory capital calculation (as mentioned in paragraph 1 above) will remain unchanged when the "expected loss" provisioning model under International Financial Reporting Standard 9 (IFRS 9) comes into effect from 1 January 2018.

Capital treatment of expected loss provisions under the Banking (Capital) Rules (BCR)

3. To align with the expected loss provisions under the new HKFRS 9 (IFRS 9 equivalent), existing definitions for "collective provisions" (i.e. essentially GP) and "specific provisions" set out in section 2(1) of the BCR have been updated. The HKFRS 9 categories financial assets into three stages in terms of credit impairment. For capital calculation, impairment provisions pertaining to exposures classified under the first two stages (i.e. Stage 1 and Stage 2) will be treated as GP, and those pertaining to exposures classified under Stage 3 as SP. With respect to provisions made for purchased or originated credit-impaired financial assets under which any changes in lifetime expected credit losses will be recognized in profit or loss account as an impairment gain or loss, the HKMA regards that such provisions to be similar in nature to SP and hence will be treated as such for capital adequacy purposes.

Determination of Regulatory Reserve (RR) under HKFRS 9

4. The following two-step approach should be adopted for determining whether any RR is required to be maintained by an AI on top of the provisions made by it under the new accounting standard (please refer to the HKMA's consultation paper "Regulatory Treatment of Provisions under HKFRS 9" (CP 17.02)[4] for details):

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3 http://www.bis.org/bcbs/publ/d401.pdf Following the issuance of the interim standard, the BCBS continues to work on the development of a final standard to reflect expected loss provisioning within the regulatory capital framework.

4 The consultation paper is available at http://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/basel-3/CP_17_02_HKFRS9.pdf

(a) **Step 1** – calculating a benchmark regulatory provision for unidentified expected loss (benchmark) for each AI as the product of (i) a predetermined institution-specific "target rate" of the AI[5] and (ii) the AI's total loans and advances (to non-banks)[6];

(b) **Step 2** – comparing the benchmark with the relevant portion of HKFRS 9 provisions made for the AI's total loans and advances to non-banks categorised into Stage 1 and Stage 2 under HKFRS 9 which, by definition, are not credit-impaired (i.e. they are provisions for unidentified expected loss); and

   (i) where the benchmark is greater than the relevant portion of HKFRS 9 provisions, the "shortfall" will continue to be earmarked from retained earnings and maintained as RR;

   (ii) where, on the other hand, the benchmark is equal to or smaller than relevant portion of HKFRS 9 provisions so that there is no "shortfall" or an "excess" of accounting provisions, no RR will be required.

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5 Please also refer to any circulars issued by the HKMA for the latest announcement in relation to the RR calculation mechanism including the one issued on 8 April 2020 (which is available at https://www.hkma.gov.hk/media/eng/doc/key-information/guidelines-and-circular/2020/20200408e1.pdf, https://www.hkma.gov.hk/media/eng/doc/key-information/guidelines-and-circular/2020/20200408e1a1.pdf).

6 Exposures arising from IPO financing which fall within sections 64A, 113A or 202B of the BCR are excluded from the base in calculating regulatory reserve.

Annex II-D

Illustrative example to calculate the applicable amount of investments in capital instruments issued by and non-capital LAC debt liabilities of financial sector entities to be deducted from CET1 capital, Additional Tier 1 capital and Tier 2 capital

Suppose Bank A (a "section 2 institution" under section 2(1) of Schedule 4F to the BCR) holds the following capital instruments issued by and non-capital LAC liabilities of financial sector entities that fall within Schedules 4F and 4G and suppose further that Bank A has CET1 capital, Additional Tier 1 (AT1) capital and Tier 2 (T2) capital of $7,000, $2,000 and $1,500 respectively as at reporting date.

<table>
<tr><th>Investments</th><th>CET1 capital instruments</th><th>AT1 capital instruments</th><th>T2 capital instruments</th><th colspan="3">Non-capital LAC liabilities (NCLAC)</th><th>Total</th></tr>
<tr><td rowspan="2">Insignificant LAC investments</td><td rowspan="2">$650
(a)</td><td rowspan="2">$400
(b)</td><td rowspan="2">$300
(c)</td><td>Never designated under s.2(3)(a) of Schedule 4F
"Inv(NvDsg NCLAC")"</td><td>Currently designated under s. 2(3)(a) of Schedule 4F
"Inv(CurDsg NCLAC)"</td><td>Formerly designated under s.2(3)(a) of Schedule 4F
"Inv(FmDsg NCLAC)"</td><td rowspan="2">$2,050</td></tr>
<tr><td>$200
(d)</td><td>$350
(e)</td><td>$150</td></tr>
<tr><td>Significant LAC investments</td><td>$1,200</td><td>$800</td><td>$600</td><td colspan="3">$250</td><td>$2,850</td></tr>
</table>

Part I (insignificant LAC investments)

The applicable amount of insignificant LAC investments to be deducted from the institution's capital base (i.e. "***Excess(10% threshold)(net long)***", "***Excess(5% threshold)(gross long)***" and "***Inv(FmDsg NCLAC)***") should be determined according to sections 1, 2 and 4 of Schedule 4F to the BCR.[7] Such amounts should be derived based on the following illustration.

[7] For a "section 3 institution" under section 3(1) of Schedule 4F to the BCR, such applicable amount should be determined according to sections 1, 3 and 4 of the same Schedule.

<table>
<tr><th>Steps</th><th colspan="3">Calculations</th></tr>
<tr><td rowspan="2">1. Determine the 10% and 5% concessionary threshold assuming the amount of regulatory deductions to be $1,000</td><td colspan="2">CET1 capital before deductions
- Less: deductions
CET1 capital after deductions[8]</td><td>$7,000
<u>($1,000)</u>
$6,000</td></tr>
<tr><td><u>5% concessionary threshold</u>:
= $6,000 * 5%
= $300 (f)</td><td colspan="2"><u>10% concessionary threshold</u>:
= $6,000 * 10%
= $600 (g)</td></tr>
<tr><td>2. Determine the amount of investments in NCLAC that are currently designated under section 2(3)(a) of Schedule 4F but are in excess of the 5% threshold (i.e. “Excess(5% threshold)(gross long)”)</td><td>= ((e) – (f))
= $350 - $300
= $50</td><td colspan="2">Not applicable</td></tr>
<tr><td>3. Determine the total amount of investments in capital instruments and NCLAC on a net long basis that will be covered by or exceed the 10% threshold</td><td>Not applicable</td><td colspan="2">= (a) + (b) + (c) + (d)
= $650 + $400 + $300 + $200
= $1,550 (h)</td></tr>
<tr><td>4. Determine the amount of investments in capital instruments and NCLAC that are in excess of the 10% threshold (i.e. “Excess(10% threshold)(net long)”</td><td>Not applicable</td><td colspan="2">= ((h) – (g))
= $1,550 - $600
= $950</td></tr>
<tr><td>4a. Apportion the amount of investments in CET1 capital instruments to be deducted from CET1 capital</td><td>Not applicable</td><td colspan="2">= $950* ($650 / $1,550)
= $398</td></tr>
<tr><td>4b. Apportion the amount of investments in AT1 capital instruments to be deducted from AT1 capital</td><td>Not applicable</td><td colspan="2">= $950 * ($400 / $1,550)
= $245</td></tr>
</table>

[8] The CET1 capital after deductions for the calculation of the 10% and 5% threshold must take into account any deduction applied to CET1 capital due to insufficient AT1 capital and T2 capital, if any.

4c. Apportion the amount of (i) investments in T2 capital instruments and (ii) investments in NCLAC that are neither currently designated under section 2(3)(a) of Schedule 4F nor were formerly designated (i.e. ***"Inv(NvDsg NCLAC")"*** to be deducted from T2 capital	Not applicable	= $950 * (($300 + $200) / $1,550) = $307

Consequently, Bank A's holding of insignificant LAC investments in excess of <u>10%</u> concessionary threshold is **$950**, being $1,550 minus $600. The pro-rata calculation of respective amounts subject to (i) deduction from each tier of capital, and (ii) risk-weighting in accordance with the applicable risk-weights under one or more of Parts 4, 5, 6 and 8 of the BCR, as the case requires, will be as follows –

<u>Table 1</u>

	(A)		
	Amount subject to deduction	**Amount subject to risk-weighting**	**Total**
from CET1	= $950 * ($650/$1,550) = **$398**	= $600 * ($650/$1,550) = **$252**	**$650**
from AT1	= $950 * ($400/$1,550) = **$245**	= $600 * ($400/$1,550) = **$155**	**$400**
from T2	= $950 * (($300 + $200)/$1,550) = **$307**	= $600 * (($300 + $200)/$1,550) = **$193**	**$500**
	$950	**$600**	**$1,550**

Hence, the balance of CET1 capital, AT1 capital and T2 capital of Bank A after the deduction of insignificant LAC investments in Part I will be –

Table 2

	CET1 capital	AT1 capital	T2 capital
Capital balance before regulatory deductions	**7,000**	**2,000**	**1,500**
Less: deductions	*(1,000)*	*0*	*0*
*Less: "**Excess(5% threshold)(gross long)**"*	*0*	*0*	*(50)*
*Less: "**Excess(10% threshold)(net long)**"*[9]	*(398)*	*(245)*	*(307)*
*Less: "**Inv(FmDsg) NCLAC**" to be deducted in full*	*0*	*0*	*(150)*
Balance brought forward to Part II	**5,602**	**1,755**	**993**

Part II (significant LAC investments)

According to sections 1(2), (3) and (3A) of Schedule 4G to the BCR, with respect to significant LAC investments, the concessionary threshold only applies to the institution's capital investments in the form of CET1 capital instruments. Any holdings of AT1 capital instruments and T2 capital instruments issued by and non-capital LAC liabilities of financial sector entities must be fully deducted from the institution's AT1 capital or T2 capital.

[9] See column (A) of Table 1.

Table 3

	CET1 capital	AT1 capital	T2 capital	Remarks
Balance brought down from Part I	**5,602**	**1,755**	**993**	See last row of Table 2 on page 9
Less: full deduction of significant LAC investments in Tier 2 capital instruments and NCLAC			*(850)*	The sum of significant LAC investments in $600 Tier 2 capital instruments and $250 NCLAC
Less: full deduction of significant LAC investments in AT1 capital instruments		*(800)*		
Less: significant LAC investments in CET1capital instruments subject to deduction	*(640)*			The 10% concessionary threshold for significant LAC investments in CET1 capital instruments is $560, being ($5,602 * 10%). Therefore, (i) amount of significant LAC investments in CET1 capital instruments exceeding 10% concessionary threshold and subject to deduction is ($1,200 – $560) = $640 (ii) amount of significant LAC investments in CET1 capital instruments subject to 250% risk-weight is $560.
Capital after deduction of significant LAC investments	**4,962**	**955**	**143**	