Annex II-A

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 $90, $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 are assumed to be $70, $85 and $105 (i.e. corresponding to a 7% CET1 capital ratio, 8.5% Tier 1 capital ratio and a 10.5% Total capital ratio)[1] 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**	**Minimum capital requirement** *= (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	$90	30%	$27	7%	$70	$20	$6	**$21**
AT1	$40	50%	$20					**$9.8**
Tier 1	**$130**	**36%**	**$47**	**8.5%**	**$85**	**$45**	**$16.2**	**$30.8**
Tier 2	$20	75%	$15					**$12.7**
Total capital	**$150**	**41%**	**$62**	**10.5%**	**$105**	**$45**	**$18.5**	**$43.5**
		C	**A**			**B**		

[1] 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.

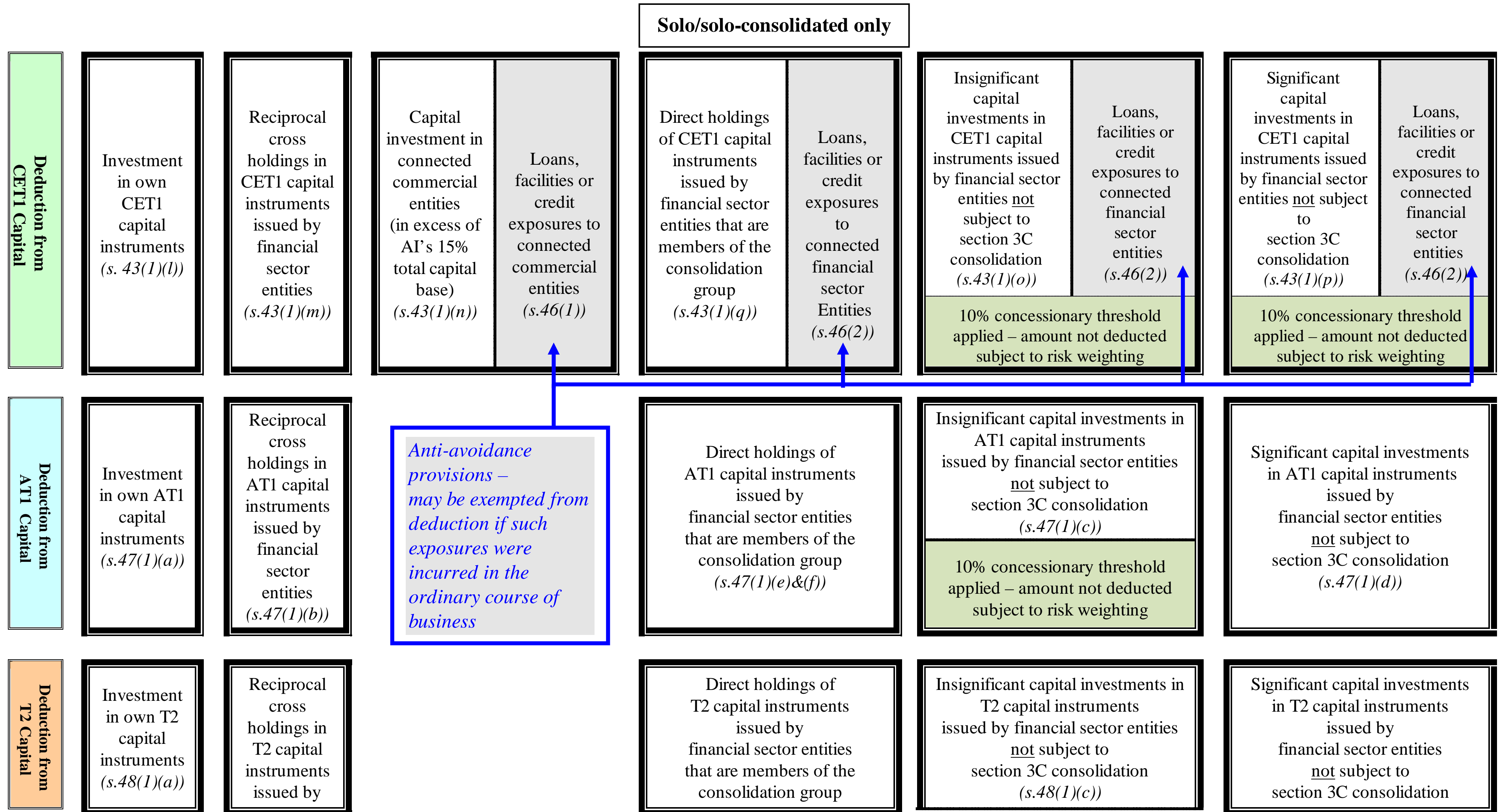
In this example, by using the formula **[A – (B * C)]** as stipulated in paragraph 15 of the completion instructions, the amount of minority interest that can be recognized in the institution's consolidated CET1 capital is $21 (i.e. $27 – ($20 * 30%)).

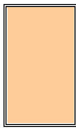
Similarly, following the same formula above, the amount of Tier 1 capital instruments (including both CET1 and AT1 capital instruments) held by third parties that can be recognized in the institution's consolidated Tier 1 capital equals to $30.8 (i.e. $47 – ($45 * 36%)). Since $21 has been recognized in the consolidated CET1 capital of the institution, only $9.8 (i.e. $30.8 - $21) of such Tier 1 capital instruments can be included in its consolidated Additional Tier 1 capital.

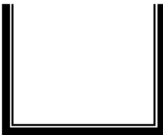
The calculation of the applicable amount of Tier 2 capital instruments held by third parties to be included in an institution's Tier 2 follows the same methodology as shown above.

Deduction of capital investments and loans, facilities or credit exposures from capital base

Annex II-B







financial
sector
entities
(s.48(1)(b))

(s.48(1)(e)&(f))

10% concessionary threshold
applied – amount not deducted
subject to risk weighting

(s.48(1)(d))

Annex II-C

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[2], 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)[3] for details):

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[2] 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.

[3] 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 and (ii) the AI's total loans and advances (to non-banks);

(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.

Annex II-D

Illustrative example to calculate the applicable amount of capital investments of financial sector entities to be deducted from CET1 capital, Additional Tier 1 capital and Tier 2 capital

Suppose Bank A holds the following capital instruments issued by financial sector entities that are not subject to a section 3C requirement and suppose further that Bank A has CET1 capital, Additional Tier 1 capital and Tier 2 capital of $5,000, $100 and $250 respectively as at reporting date.

Types of capital investments	CET1 capital instruments	AT1 capital instruments	T2 capital instruments	Total
Insignificant	$500	$400	$300	$1,200
Significant	$1,200	$800	$600	$2,600

Part I (insignificant capital investments)

According to sections (2), (3) and (4) of Schedule 4F of the BCR, the applicable amount of insignificant capital investments to be deducted from the institution's capital base should be determined having regard to a concessionary threshold equal to –

> 10% of the institution's CET1 capital, which is calculated after applying –
> (i) all regulatory deductions set out under items (f)(i) to (f)(xvii); and
> (ii) any deduction applied to CET1 capital due to insufficient Additional Tier 1 capital, if any.

The concessionary threshold should be derived based on the following two-stage approach.

Stage 1 – to find out the amount of insufficient Additional Tier 1 that is required to be deducted from Bank A's CET1 capital (i.e. item (ii) in the text box on page 6)

Steps	Calculations	
1. Determine the 10% concessionary threshold without taking into account the deduction of item (ii), assuming the amount of regulatory deductions under item (i) to be $1,000	CET1 capital before deductions - *Less: item (i) deductions* **CET1 capital after deductions**	$5,000 *($1,000)* **$4,000**
	Therefore, the 10% concessionary threshold = $4,000 * 10% = $400	
2. Apportionment of the applicable amount of CET1 capital investments to be deducted from CET1 capital	= ($1,200 - $400) * ($500 / $1,200) = $333	
3. Apportionment of the applicable amount of Additional Tier 1 capital investments to be deducted from Additional Tier 1 capital	= ($1,200 - $400) * ($400 / $1,200) = $267	
4. Apportionment of the applicable amount of Tier 2 capital investments to be deducted from Tier 2 capital	= ($1,200 - $400) * ($300 / $1,200) = $200[4]	
5. Determine the amount of insufficient Additional Tier 1 capital that is required to be deducted from Bank A's CET1 capital	= ($267 - $100) = $167	

[4] This amount, which is smaller than the available Tier 2 capital (i.e. $250) of Bank A, will not contribute towards insufficient Additional Tier 1 capital.

Stage 2 – with the amount of insufficient Additional Tier 1 capital arrived at in Stage 1, we can now calculate the 10% concessionary threshold taking into account of both items (i) and (ii) in the text box on page 6

Steps	Calculations	
6. Determine the 10% concessionary threshold taking into account the regulatory deductions of both items (i) and (ii)	CET1 capital before deductions *Less: item (i) deductions* *Less: item (ii) deductions* **CET1 capital after deductions**	$5,000 *($1,000)* *($167)* **$3,833**
	Therefore, the 10% concessionary threshold = $3,833 * 10% = $383	

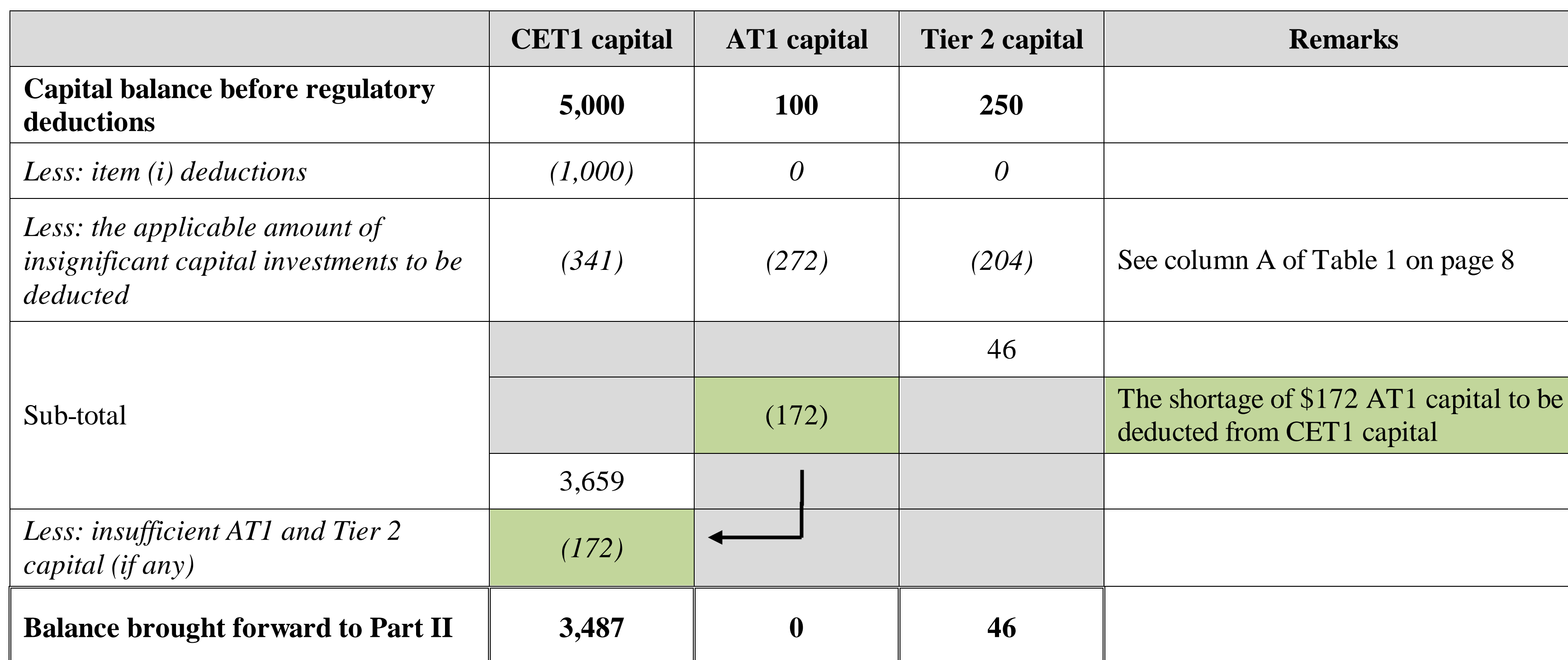
Consequently, Bank A's holding of insignificant capital investments in excess of 10% concessionary threshold is **$817**, being $1,200 minus $383. The pro-rata calculation of respective amounts subject to (a) deduction from each tier of capital, and (b) risk-weighting in accordance with the applicable risk-weights under Part 4, 5, 6 or 8 of the BCR, as the case requires, will be as follows –

Table 1

	(A)		
Amount subject to deduction		**Amount subject to risk-weighting**	**Total**
from CET1	= $817 * ($500/$1,200) = **$341**	= $383 * ($500/$1,200) = **$159**	**$500**
from AT1	= $817 * ($400/$1,200) = **$272**	= $383 * ($400/$1,200) = **$128**	**$400**
from T2	= $817 * ($300/$1,200) = **$204**	= $383 * ($300/$1,200) = **$96**	**$300**
	$817	**$383**	**$1,200**

Hence, the balance of CET1 capital, Additional Tier 1 capital and Tier 2 capital of Bank A after the deduction of insignificant capital investments in Part I will be –

Table 2



	CET1 capital	AT1 capital	Tier 2 capital	Remarks
Capital balance before regulatory deductions	**5,000**	**100**	**250**	
Less: item (i) deductions	*(1,000)*	*0*	*0*	
Less: the applicable amount of insignificant capital investments to be deducted	*(341)*	*(272)*	*(204)*	See column A of Table 1 on page 8
Sub-total			46	
		(172)		The shortage of $172 AT1 capital to be deducted from CET1 capital
	3,659			
Less: insufficient AT1 and Tier 2 capital (if any)	*(172)*	←		
Balance brought forward to Part II	**3,487**	**0**	**46**	

Part II (significant capital investments)

According to sections (2) and (3) of Schedule 4G of the BCR, with respect to significant capital investments, the concessionary threshold only applies to the institution's capital investments in the form of CET1 capital instruments. Any holdings of Additional Tier 1 and Tier 2 capital instruments must be fully deducted from the institution's Additional Tier 1 capital or Tier 2 capital. The concessionary threshold for significant capital investment is equal to –

> 10% of the institution's CET1 capital, calculated after applying –
> (i) all regulatory deductions set out under items (f)(i) to (f)(xix), (f)(xxi); and
> (ii) any deduction applied to CET1 capital due to insufficient Additional Tier 1 capital, if any.

The concessionary threshold should be derived based on the following workflow in case insufficient Additional Tier 1 capital is required to be deducted from Bank A's CET1 capital (i.e. item (ii) in the textbox above).

Table 3

	CET1 capital	AT1 capital	Tier 2 capital	Remarks
Balance brought down from Part I	**3,487**	**0**	**46**	See last row of Table 2 on page 9
Less: full deduction of significant AT1 and Tier 2 capital investments		*(800)*	*(600)*	
Sub-total			*(554)*	The shortage of $554 Tier 2 capital to be deducted from AT1 capital
		(1,354)	←	The shortage of $554 Tier 2 capital together with the shortage of $800 AT1 capital (i.e. $1,354 in total) to be deducted from CET1 capital
Less: insufficient AT1 and Tier 2 capital to be deducted from CET1 capital	*(1,354)*	←		
Balance after items (i) and (ii) deductions in the text box on page 10	2,133	0	0	Therefore, the 10% concessionary threshold for capital investments in the form of CET1 capital instruments (i.e. amount subject to 250% risk-weight) is ($2,133 * 10%) = $213
Less: Significant CET1 capital investments subject to deduction	*(987)*			Amount of significant CET1 capital investments exceeding 10% concessionary threshold and subject to deduction: ($1,200 – $213) = $987
Capital after deduction of significant capital investments	**1,146**	**0**	**0**	

Basel III Transitional Arrangements

Treatment of capital instruments that no longer qualify for inclusion in capital base (non-complying capital instruments)

The following phase-out treatment will apply to non-complying capital instruments.

1. Non-common equity Tier 1 and Tier 2 capital instruments that do not qualify as Additional Tier 1 capital (i.e. failed to meet the qualifying criteria specified in Schedule 4B of the BCR) or Tier 2 capital (i.e. failed to meet the qualifying criteria specified in Schedule 4C of the BCR) but were included in an Authorized Institution's (AIs) capital base before 1 January 2013 (collectively referred to "extant capital instruments") may be phased out during the 10-year period beginning from 1 January 2013. Fixing the base at the nominal amount of such instruments outstanding immediately before 1 January 2013, their recognition will be capped at 90% from 1 January 2013, with the cap reducing by 10 percentage points in each subsequent year[5]. For example, an AI that issued a Tier 1 extant capital instrument in August 2010 will be able to count 90 percent of the notional outstanding amount of the instrument as of 1 January 2013 during calendar year 2013, 80 percent during calendar year 2014, and so on. As of 1 January 2022, no Tier 1 extant capital instruments will be recognized in Tier 1 capital.

Progressive phasing out of non-complying capital instruments

Commencement date	Percentage of base amount of transitional instruments that may be included in Additional Tier 1 and Tier 2 capital under the phase-out arrangement
1 January 2013	90%
1 January 2014	80%
1 January 2015	70%
1 January 2016	60%
1 January 2017	50%
1 January 2018	40%
1 January 2019	30%
1 January 2020	20%
1 January 2021	10%
1 January 2022	0%

2. This progressively reducing cap will be applied to Additional Tier 1 capital and Tier 2 capital separately based on the aggregate amount of extant capital instruments outstanding

[5] The level of the base is fixed on 1 January 2013 and does not change thereafter.

in each tier[6]. To the extent that an instrument is redeemed, or its recognition in capital is amortized, after 1 January 2013, the nominal amount serving as the base is not reduced. In addition, instruments may only be included under a particular cap to the extent that they are recognized in that tier of capital. That is to say, any amount of instruments issued in excess of the limits allowed for recognition prior to 1 January 2013 (e.g. supplementary capital limited to the institution's core capital; and term debt capital limited to 50% core capital) will not be eligible for the gradual phasing-out treatment (i.e. any such excess amount should be excluded from the calculation of the base amount). Nevertheless, such instruments will be allowed to be fully recognized (i.e. without limitation) on and after 1 January 2013 if they meet all the qualifying criteria specified in Schedule 4B for inclusion in Additional Tier 1 capital or Schedule 4C for inclusion in Tier 2 capital of the BCR, as the case may be, and with the approval of the HKMA.

3. Where an instrument's recognition in capital is subject to amortization on or before 1 January 2013, only the amortized amount recognized in capital on 1 January 2013 should be taken into account in the amount fixed for transitioning rather than the full nominal amount. The instrument will continue to amortize on a straight-line basis at a rate of 20% per annum during the transition period, while the aggregate cap will be reduced at a rate of 10% per year.

4. Share premium may be included in the base provided that it relates to an instrument that is eligible to be included in the base for the transitional arrangements.

5. Non-qualifying instruments that are denominated in a foreign currency should be included in the base using their value in the reporting currency of the institution as at January 1, 2013. The base will be fixed in the reporting currency of the institution throughout the transition period. During the transition period, instruments denominated in a foreign currency should be valued as they are reported on the balance sheet of the institution at the relevant reporting date (adjusting for any amortization in the case of Tier 2 instruments).

6. Where an instrument is fully derecognized on 1 January 2013 or otherwise ineligible for these transitioning arrangements, the instrument must not be included in the base fixed on 1 January 2013.

Non-complying capital instruments eligible for phase-out treatment

7. The following rules will be applied to determine the extent to which non-complying capital instruments (issued by AI directly or through a subsidiary) are eligible for the phase-out treatment -

    (a) Capital instruments issued prior to 12 September 2010 that previously qualified as regulatory capital but do not meet the Basel III qualifying criteria for regulatory capital (on a forward looking basis) will be considered non-complying capital instruments and subject to phase-out as described in this Annex.

    (b) Capital instruments issued before 1 January 1 2013 that meet the Basel III qualifying criteria for regulatory capital, except that they do not meet the "non-

[6] Where an instrument is derecognized at 1 January 2013, it will not be eligible for grandfathering and does not count towards the base fixed on 1 January 2013.

viability requirements”[7], will be considered non-complying capital instruments and subject to the phase-out described in this Annex.

(c) Capital instruments issued between 12 September 2010 and 1 January 2013 that do not meet one or more of the Basel III qualifying criteria for inclusion in regulatory capital (other than the non-viability requirements) will be excluded from regulatory capital as of 1 January 2013 (i.e. they will not be subject to the phase-out described in this Annex).

(d) Capital instruments issued after 1 January 2013 must meet all of the Basel III criteria for regulatory capital (including the non-viability requirements) to qualify as regulatory capital. Instruments that do not meet all of these requirements will be excluded from regulatory capital for the purpose of determination of capital base.

8. Instruments with an incentive to redeem will be treated as follows:

Characteristics of capital instruments	Phase-out	Derecognize	Recognize
1. Call and step-up date prior to 1 January 2013, is not called and meets the new criteria			√
2. Call and step-up date on or after 1 January 2013, is not called and meets new criteria	√ Starting 1 January 2013 until effective maturity date		√ From effective maturity date onwards
3. Call and step-up date between 12 September 2010 and 1 January 2013, is not called and does not meet new criteria		√ On 1 January 2013	
4. Call and step-up date on or after 1 January 2013, is not called and does not meet new criteria	√ Starting 1 January 2013 until effective maturity date	√ On effective maturity date	

[7] Minimum requirements to ensure loss absorbency at the point of non-viability, Annex 1 of BCBS Press Release *Basel Committee issues final elements of the reforms to raise the quality of regulatory capital*, 13 January 2011.

Characteristics of capital instruments	Phase-out	Derecognize	Recognize
5. Call and step-up date on or prior to 12 September 2010, was not called and does not meet new criteria	√ Starting 1 January 2013		

(a) For an instrument that has a call and a step-up (or other incentive to redeem) prior to 1 January 2013, if the instrument is not called at its effective maturity date[8] and on a forward-looking basis (i.e. from the effective maturity date) will meet the new criteria for inclusion in Additional Tier 1 capital or Tier 2 capital, it will continue to be recognized in that tier of capital.

(b) For an instrument that has a call and a step-up (or other incentive to redeem) on or after 1 January 2013, if the instrument is not called and its effective maturity date and on a forward looking basis will meet the new criteria for inclusion in Additional Tier 1 capital or Tier 2 capital, it will continue to be recognized in that tier of capital. Prior to the effective maturity date, the instrument will be considered an "instrument that no longer qualifies as AT1 or Tier 2" and will therefore be phased out from 1 January 2013.

(c) For an instrument that has a call and a step-up (or other incentive to redeem) between 12 September 2010 and 1 January 2013, if the instrument is not called at its effective maturity date and on a forward-looking basis (i.e. from the effective maturity date) will not meet the new criteria for inclusion in Additional Tier 1 capital or Tier 2 capital, it will be fully derecognized in that tier of capital from 1 January 2013.

(d) For an instrument that has a call and a step-up (or other incentive to redeem) on or after 1 January 2013, if the instrument is not called at its effective maturity date and on a forward-looking basis (i.e. from the effective maturity date) will not meet the new criteria for inclusion in Additional Tier 1 capital or Tier 2 capital, it will be fully derecognized in that tier of capital from the effective maturity date. Prior to the effective maturity date, the instrument will be considered an "instrument that no longer qualifies as AT1 or Tier 2" and will therefore be phased out from 1 January 2013.

(e) For an instrument that has a call and a step-up (or other incentive to redeem) on or prior to 12 September 2010, if the instrument was not called at its effective maturity date and on a forward-looking basis (i.e. from the effective maturity date) does not meet the new criteria for inclusion in Additional Tier 1 capital or Tier 2 capital, it will be considered an "instrument that no longer qualifies as AT1 or Tier 2" and will therefore be phased out from 1 January 2013.

[8] Effective maturity date refers to the incentive to redeem date. Instruments without an incentive to redeem would not have an effective maturity date other than their scheduled maturity (if any).

Illustrative example – Recognition of non-qualifying capital instruments during the transitional period

Subject to Schedule 4H of the BCR, the extant capital instruments of an authorized institution that were included in the institution's capital base immediately before 1 January 2013 but do not meet all the qualifying criteria set out in Schedule 4B and 4C of the BCR, as the case may be, must be phased out during the 10-year period.

Assume Bank A has three outstanding non-qualifying Tier 2 debt instruments as at 1 January 2013 which are eligible for phase-out:

(a) **10-year Term Debt**: Notional amount of $1,000 to be matured on 1 January 2019;

(b) **10-year Term Debt**: Notional amount of $500 with a call option on 1 January 2015 (assume that it will be derecognized after 1 January 2015)

(c) **Perpetual Debt**: Notional amount of $500

Based on the above information, the amount of non-qualifying capital instruments that may be recognized in Tier 2 capital of Bank A from 1 January 2013 to 31 December 2022 has been worked out in the following table. Authorized institutions are suggested to follow the below 4 steps in deriving the eligible amount that can be included as part of its capital base each year during the phase-out period.

Step 1: Consider the maturity profile of each non-compliant instrument, including the 5-year amortization

Step 2: Calculate the total amount of all non-compliant capital instruments **[A]**

Step 3: Calculate the capped amount (subject to 10% phase-out) by fixing the base on 1 January 2013 **[B]**

Step 4: The lower of either [A] or [B] is the amount that could be recognized as Tier 2 capital **[Min (A,B)]**

Reporting Date	Step 1			Step 2	Step 3	Step 4
	Debt (a)	**Debt (b)**	**Debt (c)**	**Total amount of all non-compliant capital instruments [A]**	**Cap amount at each year[#] [B]**	**Amount that may be recognized in Tier 2 capital [Min (A,B)]**
1/1/2013	$1,000	$500	$500	$2,000	$1,800	$1,800
1/1/2014	$1,000	$500	$500	$2,000	$1,600	$1,600
1/1/2015	$800[*]	$0	$500	$1,300	$1,400	$1,300
1/1/2016	$600	$0	$500	$1,100	$1,200	$1,100
1/1/2017	$400	$0	$500	$900	$1,000	$900
1/1/2018	$200	$0	$500	$700	$800	$700
1/1/2019	$0	$0	$500	$500	$600	$500
1/1/2020	$0	$0	$500	$500	$400	$400
1/1/2021	$0	$0	$500	$500	$200	$200
1/1/2022	$0	$0	$500	$500	$0	$0

Note:

* Debt (a) starts in 2015 the 20% straight line amortization in the remaining 5 year before maturity.

\# The extant Tier 2 capital instruments subject to phase-out as at 1.1.2013 are $2,000. Therefore, this cap amount will be reduced by 10 percentage points in each subsequent year.