HSBC

Appendix III – validation errors identified in the COREP templates

We have identified the following perceived template and validation errors, and have provided suitable corrections where possible. We would be pleased to work with the EBA in testing future proposed validations and would be happy to advise on how they are likely to work in practice.

CR-SA

Validation rule errors

Given: For columns 010 to 030, 150 to 210 and 500: rows 010 = **200** + 130 + 140 + 160 + 180 + 200 + 230 + 250 + 260 + 300 + 340 + 350 + 360

Correction: For columns 010 to 030, 150 to 210 and 500: rows 010 = **110** + 130 + 140 + 160 + 180 + 200 + 230 + 250 + 260 + 300 + 340 + 350 + 360

Reason: Typographical error in the formula

Given: For column 240: rows 010 = 020 + 030 + 040

Correction: For column 240: rows 010 = 020 + 030 + 040 **+ 070**

Reason: Row 070: Article 297(1) an institution shall apply a risk weight of 2% to the exposure values of all its trade exposures with CCPs

Given: For column 240: row 040 = **060**

Given: For column 240: row **050** = 090

Reason: Rows 060 and 050 are grey cells in CR SA Total template and are not populated

Given: For rows 010, 030 and 110 to 550: columns 200 = **110**-160-(0.8*170)-(0.5*180)

Correction: For rows 010, 030 and 110 to 550: columns 200 = **150**-160-(0.8*170)-(0.5*180)

Reason: Typographical error in the formula

Given: For rows 010 to 100 and 380 to 550: columns 110 = 040 + **090** +100

Correction: For rows 010 to 100 and 380 to 550: columns 110 = 040 + **070** +100

Reason: Column 090 is an 'of which' column – it is greyed out for the column / row combination indicated and is not populated

Given: For rows 010 to 070 and 380 to 550: columns 500 ≥ (0.02*240) + (0.1*250) + (0.2*280) + (0.35*310) + (0.5*320) + (0.7*350) + (0.75*370) + **3800** + (1.5*410) + (2.5*450) + (12.5*460)

Correction: For rows 010 to 070 and 380 to 550: columns 500 ≥ (0.02*240) + (0.1*250) + (0.2*280) + (0.35*310) + (0.5*320) + (0.7*350) + (0.75*370) + **380** + (1.5*410) + (2.5*450) + (12.5*460)

Reason: Typographical error in the formula

Given: For rows 0100: columns 500 ≥ (0.1*250) + (0.2*280) + (0.35*310) + (0.5*320) + (0.7*350) + (0.75*370) + **3800** + (1.5*410) + (2.5*450) + (12.5*460)

Correction: For rows 0100: columns 500 ≥ (0.1*250) + (0.2*280) + (0.35*310) + (0.5*320) + (0.7*350) + (0.75*370) + **380** + (1.5*410) + (2.5*450) + (12.5*460)

Reason: Typographical error in the formula

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CR SA Details specific

Given:	Row 080 of which: OTC-Derivatives
Correction:	Row 080 of which: OTC-Derivatives, **not centrally cleared**
Reason:	Typographical error in the formula

Given:	Row 090 Centrally cleared through compliant CCP
Correction:	Column 090 **of which**: Centrally cleared through compliant CCP
Reason:	Typographical error in the formula

Given:	For row 151, 171, 211, 281, 331 and 371
	of which: with a **credit** assessment derived from central government
Correction:	of which: with a **credit** assessment derived from central government
Reason:	Typographical error in the formula

Given:	For row 120, 150, 170, 210 and 330
	of which: **without** credit assessment by a nominated ECAI
Correction:	of which: **with** credit assessment by a nominated ECAI
Reason:	Typographical – legal references / Instructions and CR SA Total spreadsheet state these columns should be populated **with**

CR SA Totals specific

Given:	For row 400; Public sector **entities**
Correction:	For row 400; Public sector **entities**
Reason:	Typographical error in the formula

Given:	For rows 151, 171, 211, 281, 331 and 371
	of which: with a **crdit** assessment derived from central government
Correction:	For rows 151, 171, 211, 281, 331 and 371
	of which: with a **credit** assessment derived from central government
Reason:	Typographical error in the formula

Validation rule(s) indicated as CR SA but actually specific to CR SA Totals:

For columns 010 to 030, 150 to 210 and 500: row 200 ≥ 220
- Row 220: 50% of which secured by commercial immovable property doesn't appear on the CR SA Details template.

For columns 010 to 030, 150 to 210 and 500: row 260 ≥ 270 + 290
- Row 270: 100% of which in default and row 290: 100% of which secured by mortgages on immovable property don't appear on the CR SA Details template.

For columns 010 to 030, 150 to 210 and 500: row 300 ≥ 310 + 330
- The row 310: 150% of which in default doesn't appear on the CR SA Details template. In the Details template exposure secured by mortgages on immovable property and exposures in default are only reported within the 'Memorandum Items'

For rows 010 and 040 to 410: column 040 = 010 + 030

- Rows 380 to 410 are the first four lines of the 'breakdown of total exposures by exposure class' and only appear on the CR SA Totals template.

For rows 010 to 100 and 380 to 550: column 150 = 110 + 120 + 130

- Rows 380 to 550 are for the 'breakdown of total exposures by exposure class' and only appear on the CR SA Totals template.

Inconsistencies in restricted cells between CR SA Totals and Details templates

The grey cells are inconsistent between the total and details templates. These inconsistencies are outlined below - we ask the EBA to amend the templates accordingly.

REF	COLUMN	ROW	CR SA Totals	CR SA Details
1	**020** of which: arising from default fund contributions	**030** off balance sheet exposures subject to credit risk		
2	**020** of which: arising from default fund contributions & **040 - 150** fully adjusted exposure value (E*) & **200** exposure value & **210** of which: arising from counterparty credit risk & **500** risk weighted exposure amount	**080** of which: OTC-Derivatives		
3	**020** of which: arising from default fund contributions & **040 - 150** fully adjusted exposure value (E*) & **500** risk weighted exposure amount	**090** of which: Centrally cleared through compliant CCP		
4	**510** total number of counterparties	**050** of which: subject to CVA charge & **060** of which: centrally cleared through a compliant CCP also for SFTs		
5	**010** original exposure pre conversion factors - **210** of which arising from counterparty credit risk	**210** of which: without credit assessment by a nominated ECAI		
6	**010** original exposure pre conversion factors - **210** of which arising from counterparty credit risk	**211** of which: with a credit assessment derived from central government		

Formula errors within templates

(a) **CR SA Details column 110 Net exposure after CRM substitution effects pre conversion factors**

Given: 110 = 040 + 090 + 1000

Correction: 110 = 040 + 090 + **100**

Reason: Typographical error in the formula.

(b) **Inconsistent format between Detail and Totals template; column 150 Fully adjusted exposure value (E*)**

Given: CR SA Totals template shows the formula '150 = 110 + 120 + 130'.

Correction: **CR SA Details template shows the formula '150 = 110 + 120 + 130'.**

Reason: The above formula is missing from the CR SA Details template and needs to be inserted.

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(c) CR SA Details; column 200 Exposure Value

Given:	$200 = \mathbf{110} - 160 - 0.8*170 - 0.5*180$
Correction:	$200 = \underline{\mathbf{150}} - 160 - 0.8*170 - 0.5*180$
Reason:	Typographical error in the formula.

CR-IRB

Validation rule errors applicable to CR IRB 3.3.a

Given:	For columns 030, 040-090, 110, 140-210, 240
	Rows 010 = rows **010** + 020 + 030 +040 + 050 + 060
Correction:	For columns 030, 040-090, 110, 140-210, 240
	Rows 010 = rows 020 + 030 +040 + 050 + 060
Reason:	Typographical error in the formula
Given:	For **columns** 010-070, 130, 140, 240, 250
	Columns 090 = columns 030 + 070 + 080
Correction:	For **rows** 010-070, 130, 140, 240, 250
	Columns 090 = columns 030 + 070 + 080
Reason:	Typographical error in the formula

Legal references, comments and regulation look to be omitted or are in error

Row 070 appears as '1.1 Exposures assigned to obligor grade or pool' instead of '1.1 Exposures assigned to obligor grade or pool; **Total**'

- Also contains the population description for row 140, see ITS row instructions.

Row(s) 140 Breakdown of total exposures assigned to obligor grades or pools has been omitted.

CR-EQ

Validation errors

CREQU080

Given:	{070;080}{070;060}*190%
Correction:	{070;080} = {070;060}*190%
Reason:	'=' sign is missing from the formula

CREQU090

Given:	{070;090}{070;060}*0,8%
Correction:	{070;090} = {070;060}*0,8%
Reason:	'=' sign is missing from the formula

CREQU100

Given:	{080;080}{080;060}*290%
Correction:	{080;080} = {080;060}*290%
Reason:	'=' sign is missing from the formula

CREQU110

Given:	{080;090} {080;060}*0,8%
Correction:	{080;090} = {080;060}*0,8%
Reason:	'=' sign is missing from the formula

CREQU120

Given:	{090;080} {090;060}*370%
Correction:	{090;080} = {090;060}*370%
Reason:	'=' sign is missing from the formula

CREQU130

Given:	{090;090} {090;060}*2,4%
Correction:	{090;090} = {090;060}*2,4%
Reason:	'=' sign is missing from the formula

CREQU140

Given:	{CR EQU IRB; 010; 080}={CA2;**XXX**}
Correction:	{CR EQU IRB; 010; 080}={CA2;**420**}
Reason:	CA2 row reference not included

CREQU150

Given:	absolute value of {CR EQU IRB;020;090} + absolute value of {CR EQU IRB;050;090} = absolute value of {**CA1;XXX**}
Reason:	Should CA1;XXX be CA1;380 (-) IRB shortfall of provisions to expected losses and equity expected loss amounts?

CR SEC SA

Validation error

Given:	Cell {010;380} Link to CA template (Item **2.1.1.2**: Securitisation positions SA)
Given:	Cell {020;380} Link to CA template (Item **2.1.1.2***: of which re-securitisation)
Reason:	2.1.1.2 is not a valid reference within CA templates

CR SEC IRB

Validation error

Given:	Cell {010;450} Link to CA template (Item **2.1.2.4**: Securitisation positions SA)
Given:	Cell {020;450} Link to CA template (Item **2.1.2.4***: of which re-securitisation)
Reason:	2.1.2.4 is not a valid reference within CA templates

OPR

Validation errors

Validation rule 1: {OPR;010;070}

Given:	If 010/010 or/and 010/020 or/and 010/030 exists then 010/70 exists

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Correction:	If 010/010 or/and 010/020 or/and 010/030 exists then 010/**0**70 exists
Reason:	Typographical error in the formula

Validation rule 2: {OPR;020;070}

Given:	020/070 must exist if anything exist in the matrix between 0130/010 and 100/030
Correction:	020/070 must exist if anything exist<u>s</u> in the matrix between 030/010 and 100/030
Reason:	Typographical error in the formula

Missing validations

We believe that the following validations are missing and need to be included in the validation rules:
- {OPR;130/070}: If 130/010 or/and 130/020 or/and 130/030 exists, then 130/070 exists.
- {OPR;010/071} = 010:071*12.5%
- {OPR;020/071} = 020/071*12.5%
- {OPR;130/071} = 130/071*12.5%

MKR SA CTP

Validation error

Given:	010;450 = If {010;430} >= {010;440} then {010;450} = {010;430} If **01044 > 01043** then **01045=01044**
Correction:	010;450 = If {010;430} >= {010;440} then {010;450} = {010;430} If <u>{010;440}</u> > <u>{010;430}</u> then <u>{010;450}</u> = <u>{010;440}</u>
Reason:	Typographical error in the formula

MKR SA EQU

Validation error

Given:	Row 010;column 070 = {010;060}*12.5 Link to {CA2;**590**}
Correction:	Row 010;column 070 = {010;060}*12.5 Link to {CA2;<u>**580**</u>}
Reason:	Typographical error in the formula

MKR SA SEC

Validation errors

Given:	Columns 090 to 110, 170, 200, 230 to 290, 320 to 340, 400, 430, 460 to 520, 550 to 600 Rows {010} = {030}+{060}+{090} {010}≥{020} {030}={040}+{050} {060}={070}+{080}
Correction:	Columns 090 to 110, 170, 200, 230 to 290, 320 to 340, 400, 430, 460 to 520, 550 to 600

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Rows

{010} = {030}+{060}+{090}
{010}≥{020}
{030}={040}+{050}
{060}={070}+{080}
{090}={100}+{110}

Reason: Missing validation

Given: Row010;column **026** =
{030;**025**}*{030;**026**}+{060;**025**}*{060;**026**}+{090;**025**}+{090;**026**}/010;025

Correction: Row010;column **260** =
{030;**250**}*{030;**260**}+{060;**250**}*{060;**260**}+{090;**250**}*{090;**260**}/010;**250**

Reason: Typographical error in the formula

Given: Row010;column **049** =
{030;**048**}*{030;**049**}+{060;**048**}*{060;**049**}+{090;**048**}*{090;**049**}/010;**048**

Correction: Row010;column **490** =
{030;**480**}*{030;**490**}+{060;**480**}*{060;**490**}+{090;**480**}*{090;**490**}/010;**480**

Reason: Typographical error in the formula

CR IP Losses

Legal references, comments and regulation appear to be omitted or are in error

Given: Column 030, 070, 100 is calculated with the Standardised Approach of **Title I chapter 2 of part 3** of CRR

Correction: Column 030, 070, 100 is calculated with the Standardised Approach of **Part 3, Title II, chapter 2** of CRR

Reason: CRR reference error

Given: Column 030, 070,100 is calculated with the Internal Ratings Based Approach of **Title I chapter 3 of part 3** of CRR

Correction: Column 030, 070,100 is calculated with the Internal Ratings Based Approach of **Part 3, Title II, chapter 3** of CRR

Reason: CRR reference error

CA

Validation errors

CA1

Given: CA1;490 = -Max[(CA4;040-CA4;090)-CA4;200,0]
(-) Deductible deferred tax assets that rely on <u>future profitability and arise from temporary differences</u> = -Max[(Deferred tax assets that rely on future profitability and arise from temporary differences - Deductible deferred tax liabilities associated with deferred tax assets that rely on future profitability and arise from temporary differences)- **10% CET1 threshold in Article 45 of CRR,0]**

Given: CA1;500 = -Max[(CA4;440-CA4;690)-CA4;200,0]
(-) CET1 instruments of relevant entities where the institution has a <u>significant investment</u> = - Max[(Holdings of CET1 capital of relevant entities where the

Question: institution has a significant investment, net of short positions - Holdings on CET1 Capital Instruments of relevant entities where the institution has a significant investment temporary waived)]- **10% CET1 threshold in Article 45 of CRR,0]** If CA4;200 10% CET1 threshold in Article 45 of CRR, includes amounts for (a) and (b) how can this field be used to validate the two separate categories / lines in CA1?

Article 45 (a) deferred tax assets that are dependent on future profitability and arise from temporary differences and

Article 45(b) where an institution has a significant investment in a relevant entity

Given: $CA1;930 = \text{Min}[CA4;170;1.25\% \times CA4;180]$
(-) Reciprocal cross holdings in T2 Capital = Min [Total gross provisions eligible for inclusion in T2 capital;1.25% x Risk weighted exposure amounts for calculating the cap to the provision eligible as T2]

Correction: $\underline{CA1;920} = \text{Min}[CA4;170;1.25\% \times CA4;180]$
SA General credit risk adjustments = Min [Total gross provisions eligible for inclusion in T2 capital;1.25% x Risk weighted exposure amounts for calculating the cap to the provision eligible as T2]

Reason: CRR references and validation don't seem to be compatible, should the reference be CA1;920?

CA5 Table 1

Given: CA5.1 020;**030** = CA5.2 030;010 + CA.3 090;060
Correction: CA5.1 020;**040** = CA5.2 030;010 + CA.3 090;060
Reason: Table 1 column 030 is for 'adjustments to tier 1' and
Table 2 and 3
030;010 = article 462(1) and (3) specifies 'shall qualify as tier 2 instruments'
090;060 = article 463(5) 'shall qualify as tier 2items'

Given: CA5.1;030;**030** = CA5.5;030;040
Correction: CA5.1;030;**040** = CA5.5;030;040
Reason: Table 1 column 030 is for 'adjustments to tier 1'
Table 5 row 030 is for 'Amounts of own funds to be included in consolidated Tier 2 capital'

Given: CA5.1;050;**030** = CA5.6;020;060
Correction: CA5.1;050;**040** = CA5.6;020;060
Reason: Table 1 column 030 is for 'adjustments to tier 1'
Table 6 column 020 is for 'adjustments to T2'

Given: CA5.1;060;020= **CA5.7;020;050**+ **CA5.7;040;050**+ **CA5.7;060;050**+ **CA5.7;090;050**+
CA5.7;190;050+ **CA5.8;050;130**+
CA5.9;010;030+CA5.9;050;030+CA5.9;120;030+
CA5.9;150;030+**CA5.9;020;050**+**CA5.9;130;050**+**CA5.9;160;050**+CA5.10;130;050+CA5.10;160;050

Reason: Columns used in the validation don't seem to be compatible / inconsistent with the validation rule.

Table 1 column 020 is for 'adjustments to AT1'
Table 7 column 050 is for '**adjustments to T1**'
Table 8 column 130 is for '**(-) adjustments to T1**'

Table 9 'deductions from AT1' column 030 is for 'adjustments to the original deduction'

Table 9 'deductions from AT1' column 050 is for '(-) adjustments to T1'

Table 10 column 050 is for '(-) adjustments to T1'

Given:	CA5.1;060;030= **CA5.7;010;060**+ CA5.7;060;060+ **CA5.7;080;060**+ CA5.7;190;060+ CA5.8;050;140+ CA5.9;130;060+ CA5.9;160;060+ CA5.10;010;030+ CA5.10;050;030+CA5.10;120;030+CA5.10;150;030+ CA5.10;020;060+CA5.10;130;060+CA5.10;160;060
Reasons:	**(1)** Column / Row in **bold** are included in the validation formula but are 'greyed' (not for population) cells on the templates.
	(2) Columns used in the validation don't seem to be compatible / inconsistent with the validation rule.
	Table 1 column 030 is for 'adjustments to Tier 1'
	Table 7 column 060 is for 'adjustments to T2'
	Table 8 column 140 is for 'adjustments to T2'
	Table 9 'deductions from AT1' column 060 is for 'adjustments to T2'
	Table 10 'deductions from T2' column 030 is for 'adjustments to the original deduction'
	Table 10 column 060 is for '(-) adjustments to T2'

CA5 Table 5

Given:	For rows 010, 020, 030
	CA5.5;**010**;030= CA5 **Table 5;*;010**
Correction:	For rows 010, 020, 030
	CA5.5;column 030 = CA5.**5;column 010 * column 020**
Reason:	Typographical error in the formula

CA5 Table 7

Given:	CA5.7;190;060=**(-1)***CA5.7;190;040
Correction:	CA5.7;190;060=**(-0.5)***CA5.7;190;040
	CA5.7;190;050=(-0.5)*CA5.7;190;040
Reason:	Article 453(9) point (a) the amounts required to be deducted that relate to direct holdings are deducted half from Tier 1 items and half from Tier 2 items.

Given:	CA5.7;040;010=CA1;300 + **CA1;300**
Correction:	CA5.7;040;010=CA1;300 + **CA1;340**
Reason:	Typographical error in the formula

CA5 Table 10

Given:	For rows 010, 050, 120, 150
	CA5.10; column 030 = (-1) * (100-CA5.10; column 020) * CA5.10; column 010
Correction:	For rows 010, 050, 120, 150
	CA5.10; column 030 = (-1) * (100**%**-CA5.10; column 020) * CA5.10; column 010
Reason:	Typographical error in the formula

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GS

Validation errors

Given: Column 070 = CA2;040 + CA2;500

Correction: Column 070 = CA2;040 + CA2;500 **+ CA510**

Reason: CA2;500 only includes Settlement/delivery risk in the non-Trading book, should the formula included CA2:510 Settlement/delivery risk in the Trading book?

Given: Column 080 = CA2;**530**

Correction: Column 080 = CA2;**520**

Reason: CA2;530 is for 'Risk exposure amount for position, foreign exchange and commodities risks under standardised approaches (SA)' and not 'Total risk exposure amount for position, foreign exchange, commodities risks'

Given: Column 090 = CA2;**630**

Correction: Column 090 = CA2;**620**

Reason: CA2;630 is for 'OpR Basic indicator approach (BIA)', should this be CA2;630 'Total risk exposure amount for operational risk'?

Given: Column 100 = CA2;**680 + CA2;700** + CA2;740

Correction: Column 100 = CA2;**720 + CA730 + CA740**

Reason: CA;680 is for 'Advanced method' and CA;700 'Total risk exposure amount related to large exposures in the trading book', this does not validate to column 100 'Other and transitional risk exposures'