

Just in Time

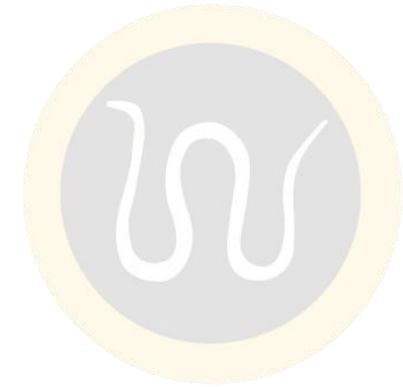
CVA

Overview of CVA Framework Main Revisions

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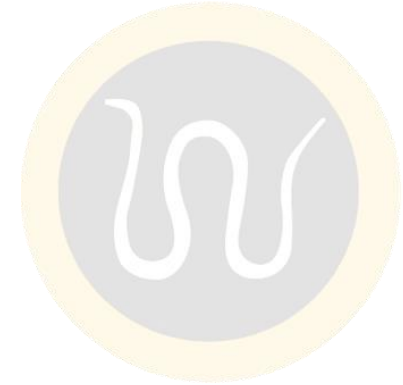
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01

Overview

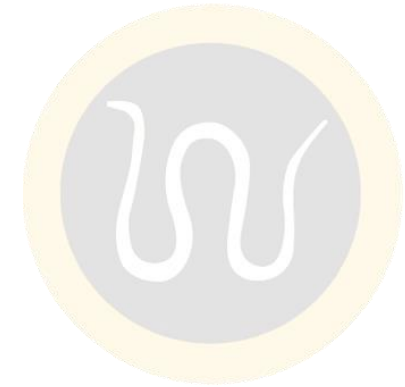


Overview

- The aim of this document is to analyze the review of the CVA risk framework set out in “Credit Valuation Adjustment risk - targeted revisions” [BIS – d507].
- CVA risk is the exposure to changes in counterparty credit spreads and other market risk factors. It is typically incurred by banks that undertake derivative or securities financing transactions, which run the risk of mark-to-market losses if the creditworthiness of the counterparties deteriorates. CVA risk is complementary to the risk of a counterparty's default, which is known as counterparty credit risk (CCR).
- CVA is an adjustment to the fair value (or price) of derivative instruments to account for counterparty credit risk (CCR). Thus, CVA is commonly viewed as the price of CCR. This price depends on counterparty credit spreads as well as on the market risk factors that drive derivatives' values and, therefore, exposure.
- The purpose of the Basel III CVA capital charge, is to capitalise the risk of future changes in CVA.

02

Roadmap

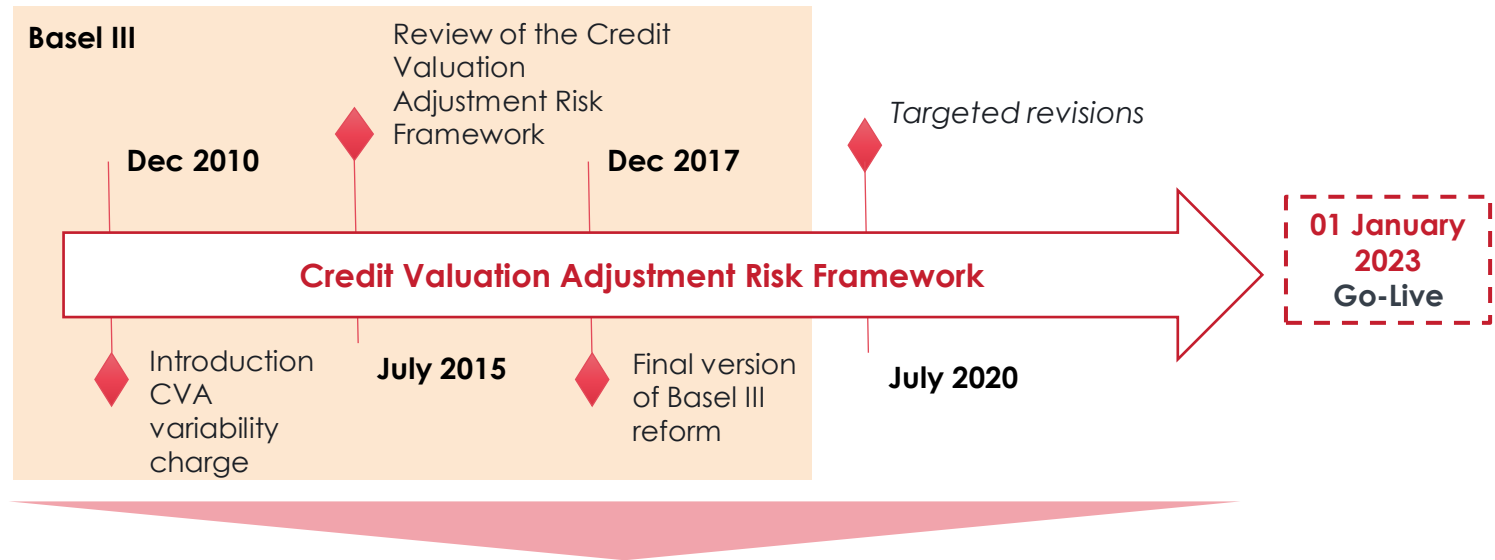


Roadmap

Main References and Milestones

- **BCBS d189:** Basel 3 A global regulatory framework for more resilient banks and banking systems (Dec 2010)
- Consultative Document Review of the Credit Valuation Adjustment Risk Framework Issue for comment by 1 October 2015 (July 2015)
- **BCBS d424:** Basel 3 finalising post-crisis reforms (Dec 2017)
- Minimum capital requirements for market risk (January 2019)
- Credit Valuation Adjustment risk: targeted final revisions -- Issued for comment by 25 February 2020 – (November 2019)
- Targeted revisions to the credit valuation adjustment risk framework (July 2020)

Basel II (market risk framework)
 take into account **default** and **migration risk** **not** potential accounting losses from **CVA variability**



During the **financial crisis**, banks suffered **significant losses** on their OTC derivatives portfolios. The majority of these losses came not from counterparty defaults but from fair value adjustments on derivatives. The value of outstanding derivative assets was written down as it became apparent that **counterparties** were **less likely** than expected to **meet their obligations**.

03

Modification to Scope and BA-CVA



Modification to Scope and BA-CVA

Alterations to the Scope of CVA Risk Capital Requirements

First revision brought by BIS to the CVA Framework is the application scope of the new regulation.

01.

Portfolios subject to CVA risk capital requirements

1. all derivatives except those transacted directly with a qualified central counterparty and **except those transactions meeting the conditions of [CRE54.14] to [CRE54.16]**
2. SFTs that are fair-valued by a bank for accounting purpose, **if supervisor considers SFTs relevant in terms of exposure**. In case the bank deems the exposures immaterial, the bank must justify its assessment to its supervisory by providing relevant supporting documentation.

Alterations to BA-CVA

The revisions goal is to improve the alignment between the two methods (BA-CVA vs. SA-CVA). To pursue this goal BIS introduced two modifications with respect to previous version for BA-CVA.

01.

A revised calibration

Introduction of scalar $DS_{ba-cva} = 0.65$ to have an appropriate relative calibration between the two methods

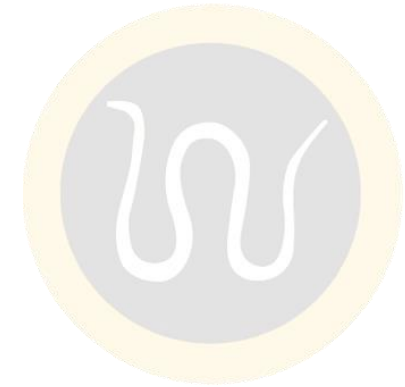
02.

Modified Risk Weights

For high yield and non-rated sovereigns, including exposures to central banks and multilateral development banks the RWs are **reduced from 3% to 2%**

06

SA-CVA



Overview

The revisions aim to align relevant parts of the revised CVA risk framework with the Minimum capital requirements for market risk published in January 2019 (before SA-CVA had more conservative RW and multiplier m_{CVA} with respect to market risk framework) as well as Capital requirements for bank exposures to central counterparties

01.

Positive Sign

In expressing the regulatory CVA, non-zero losses must have a positive sign.

02.

Modified WS_k formula

Under the convention set in point (1) above the formula is: $WS_k = WS_K^{CVA} - WS_K^{Hdg}$. This formula is intended to recognize the risk reducing effect of hedging.

03.

MPoR

Reduced floor for the margin period of risk **for SFTs and centrally-cleared client transaction specified in [CRE54.12] to 4+N** instead of 9+N, more in line with the Counterparty credit risk framework and further incentivizes banks to centrally clear over-the-counter derivatives.

N in the formula above is the re-margining period (number of days) specified in the margin agreement, in particular, for margin agreements with daily or intra-daily exchange of margin, the minimum MPoR is 5 business days

Overview

05.

Reduced value of the m_{CVA}

Reduced value of the aggregate multiplier m_{CVA} **from 1.25 to 1** in line with market risk framework. The multiplier can be higher if the supervisor determines that the bank's CVA model risk warrants it (i.e. level of model risk for CVA sens calculation is too high).

06.

New Index buckets

For **credit and equity indices** that satisfy the same **liquidity** and **diversification** conditions set out in the **market risk framework**, banks would have the **option** of calculating CVA risk capital requirements based on the **index buckets** rather than by **looking through to the underlying constituents**.

07.

New formula for aggregating across buckets

$$K = m_{CVA} * \sqrt{\sum_b K_b^2 + \sum_b \sum_{c \neq b} \gamma_{bc} * K_b * K_c}$$

$$K = m_{CVA} * \sqrt{\sum_b K_b^2 + \sum_b \sum_{c \neq b} \gamma_{bc} * S_b * S_c}$$

where:

$$S_b = \max \left\{ -K_b ; \min \left(\sum_{k \in b} w s_k ; K_b \right) \right\}$$

$$S_c = \max \left\{ -K_c ; \min \left(\sum_{k \in c} w s_k ; K_c \right) \right\}$$

Below we report the changes with respect to the previous CVA framework revision.

Interest Rates

Reduced Delta Risk weights

- ✓ Currencies USD, EUR, GBP, AUD, CAD, SEK or JPY

	1 year	2 year	5 year	10 year	30 year	Inflation
RW	1.11%	0.93%	0.74%	0.74%	0.74%	1.11%

- ✓ Currencies not specified in [MAR50.56]: **from 2.25% to 1.58%**

Capped Vega Risk weights

- ✓ Capped to 100%

Foreign Exchange

Reduced Delta Risk weights

- ✓ Reduced from 21% to 11%

Capped Vega Risk weights

- ✓ Capped to 100%

Below we report the changes with respect to the previous CVA framework revision.

Counterparty Credit Spread 1/2

New index bucket

- ✓ Buckets from 1 to 7 are for factors that are not qualified indices. All single-name and all non-qualified index hedges must be assigned to these buckets;
- ✓ Bucket 8 is for optional treatment of qualified indices.

Cross-bucket correlations for Delta Risk

Bucket	1	2	3	4	5	6	7	8
8	45%	45%	45%	45%	45%	45%	0%	100%

Delta Risk weights

- ✓ Bucket 1:
 - for HY and NR (non-rated) names: reduced **from 3% to 2%**
- ✓ Bucket 8:
 - IG names: 1.5%
 - HY and NR names: 5%

Below we report the changes with respect to the previous CVA framework revision.

Counterparty Credit Spread 2/2

Correlation parameter

- ✓ For buckets from 1 to 7 correlation parameter ρ_{kl} is computed as:

$$\rho_{kl} = \rho_{tenor} * \rho_{name} * \rho_{quality}$$

where:

ρ_{tenor} = 100% if two tenors are the same and 90% otherwise

ρ_{name} = 100% if two names are the same, 90% if distinct but legally related and 50% otherwise

$\rho_{quality}$ = 100% if the credit quality of the two names is the same and 80% otherwise

- ✓ For bucket 8 correlation parameter ρ_{kl} is computed as:

$$\rho_{kl} = \rho_{tenor} * \rho_{name} * \rho_{quality}$$

where:

ρ_{tenor} = 100% if two tenors are the same and 90% otherwise

ρ_{name} = 100% if two indices are the same and of the same series, 90% if distinct series and 80% otherwise

$\rho_{quality}$ = 100% if the credit quality of the two indices is the same and 80% otherwise

Below we report the changes with respect to the previous CVA framework revision.

Reference Credit Spread

New index bucket

- ✓ Buckets 16 and 17 for Qualified Indices, respectively IG and HY Qualified Indices

Cross-bucket correlations for Delta and Vega Risk

Bucket	1/8	2/9	3/10	4/11	5/12	6/13	7/14	15	16	17
16	45%	45%	45%	45%	45%	45%	45%	0%	100%	75%
17	45%	45%	45%	45%	45%	45%	45%	0%	75%	100%

Delta Risk weights

IG Bucket	1	2	3	4	5	6	7	8	9
RW	0.5%	1%	5%	3%	3%	2%	1.5%	2%	4%
HY/NR Bucket	10	11	12	13	14	15	16	17	
RW	12%	7%	8.5%	5.5%	5%	12%	1.5%	5%	

Capped Vega Risk weights

- ✓ Capped to 100%

Below we report the changes with respect to the previous CVA framework revision.

Equity

New index bucket

- ✓ Buckets 12 and 13 for Qualified Indices, respectively Large Cap/Advanced economy and Other Indices

Cross-bucket correlations for Delta and Vega Risk

Bucket	1/6	2/7	3/8	4/9	5/10	11	12	13
12	45%	45%	45%	45%	45%	0%	100%	75%
13	45%	45%	45%	45%	45%	0%	75%	100%

Delta Risk weights

- ✓ For bucket 12 is set to 15%
- ✓ For bucket 13 is set to 25%

Capped Vega Risk weights

- ✓ For Large Market Cap buckets (1-8) is capped to 78%
- ✓ For other buckets (9-13) is set to 100%

Commodity

Capped Vega Risk weights

- ✓ Capped to 100%

Company Profile

Iason is an international firm that consults Financial Institutions on Risk Management. Iason integrates deep industry knowledge with specialised expertise in Market, Liquidity, Funding, Credit and Counterparty Risk, in Organisational Set-Up and in Strategic Planning

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