BANKING METRICS SERIES

Risk-Weighted Assets

Not all assets carry equal risk.

Four categories under Basel III:

credit, market, operational, CVA.

BANKING METRIC SERIES

The RWA Formula

Bank assets are weighted by the risk they carry, to translate balance sheet exposures into capital requirements.

$$RWA = \Sigma (Asset \times Risk\ Weight)$$

Template EU OV1 - Overview of total risk exposure amounts

		TOTAL RISK EXPOSURE AMOUNTS (TREA)	
		a	b
DESCRIPTION		31.12.2025	30.09.2025
1	**Credit risk (excluding CCR)**	**218,797**	**216,862**
2	*Of which the standardised approach*	*87,016*	*84,904*
3	*Of which the foundation IRB (F-IRB) approach*	*46,908*	*47,182*
4	*Of which slotting approach*	*1,911*	*1,757*
EU 4a	*Of which equities under the simple risk weighted approach*	-	-
5	*Of which the advanced IRB (A-IRB) approach*	*71,031*	*72,311*
6	**Counterparty credit risk - CCR**	**6,479**	**7,098**
7	*Of which the standardised approach*	*1,218*	*1,308*
8	*Of which internal model method (IMM)*	*4,675*	*5,050*
EU 8a	*Of which exposures to a CCP*	*450*	*562*

KEY TAKEAWAY

Bank Assets are everything a bank owns: loans granted to customers (which generate interest income), securities (such as government bonds), and cash reserves held at the central bank.

Bank Assets are weighted for the carried risk in the RWA formula

Credit Risk RWA: SA vs IRB

Loss if a client fails to repay an asset. Under Basel III Finalization, banks choose one of three approaches.

Standardised Approach

SA

Fixed regulatory risk weights by exposure class.

- Corporates: 65–100%
- Retail: 75%
- Residential mortgages: 20–70%
- Sovereigns: 0–150%

Foundation IRB

F-IRB

Banks estimate PD with own quantitative models.

Supervisors provide LGD and EAD parameters.

Intermediate flexibility between SA and A-IRB.

Advanced IRB

A-IRB

Banks estimate all parameters (PD, LGD, EAD) with own quantitative models.

Maximum flexibility, but most restrictive scope under Basel IV.

Removed for large corporates and FIs.

APPROACH AVAILABILITY BY EXPOSURE CLASS

Exposure Class	SA	F-IRB	A-IRB
Sovereigns & Central Banks	✓	✓	✗
Banks & Financial Institutions	✓	✓	✗
Large Corporates (rev. > €500m)	✓	✓	✗
Corporates (rev. ≤ €500m)	✓	✓	✓
Retail	✓	✗	✓
Equity	✓	✗	✗

Market Risk: The FRTB Revolution

Basel III Finalization replaced the old VaR-based framework with a complete overhaul for trading book capital.

EXPECTED SHORTFALL

ES 97.5%

Replaces the old 99% VaR.
More conservative as captures tail risk.

Sensitivity-Based Approach (SBA)

New standardized method. Calculates delta, vega and curvature risk charges across 5 risk classes: Interest Rate, Credit Spread, FX, Equity and Commodity. Also includes Default Risk Charge (DRC) and Residual Risk Add-On (RRAO) for complex instruments.

Internal Models Approach (IMA)

Banks may use IMA but only for specific trading desks, subject to P&L Attribution Test and backtesting. Uses Expected Shortfall at 97.5% over a 10-day horizon.

Source: BCBS — Minimum capital requirements for market risk (January 2019)

Trading Book / Banking Book boundary: FRTB introduces strict criteria for classifying instruments. Arbitrary boundary shifts to reduce capital are no longer permitted.
EU implementation via CRR3 is phased in from January 2025, making FRTB the new market risk standard for European banks.

KEY TAKEAWAY

The new framework significantly raises market risk capital floors and enforces a rigid boundary between the Trading and Banking Books. Banks must choose between the SBA or the Internal Models Approach (IMA), subject to strict regulatory "health checks".

Operational Risk RWA: One Standard, One Formula

Basel III Finalization replaced all previous approaches with a single Standardized Approach based on bank size and loss history.

Business Indicator (BI)

Removes model discretion, increases comparability across banks, and simplifies capital calculation globally.

A financial measure of the bank business volume.

Three income components: Interest, Lease & Dividend (ILDC); Services Component; Financial Component (P&L).

BIC — BI Component

Applied to a bank's BI to produce its capital requirement under the Standardized Approach.

Focus on the 3-year average.

Three coefficients (12%, 15%, 18%) depending on business volume. Larger volume → higher penalisation.

Internal Loss Multiplier (ILM)

Adjusts BIC based on bank's loss history, incentivizing better operational risk management.

EU CRR3 sets ILM = 1 for most banks, simplifying capital calculation to BIC only.

Banks with large loss histories relative to their BI may see increased capital requirements. Operational risk is now truly standardized.

KEY TAKEAWAY

Under Basel III Finalization, the previous internal model-based approach is replaced by a single standardized Approach (SA). The EU (via CRR3) has opted to set Internal Loss Multiplier = 1, effectively basing OpRisk capital solely on the Business Indicator Component (BIC).

CVA Risk RWA: The Fourth Component

CVA is the market value of counterparty credit risk on OTC derivatives. CVA Risk captures MTM losses from changes in counterparty credit quality (not default itself).

SA-CVA

Sensitivity-based

Mirrors FRTB-SBA using delta/vega sensitivities of CVA to market factors.

Most accurate but requires sophisticated risk infrastructure.

BA-CVA

Basic / simpler

Based on standardized CCR haircut, effective maturity, and supervisory credit spreads.

Easier to implement but less risk-sensitive.

Internal Model

Abolished

Removed under Basel III Finalization.

Internal CVA models no longer allowed for regulatory capital purposes.

CVA is forward-looking and driven by credit spread movements

The higher the counterparty CDS spread, the higher the CVA and the higher the RWA.
CVA captures deterioration in counterparty creditworthiness, not just default events.

This is Episode 3 of the Banking Metrics Series.
Each episode takes one key metric, breaks it down from principles, and illustrates it with real data.