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Credit Spread Risk in the Banking Book

Banking Industry Common Understanding

In October 2022, the European Banking Authority (EBA) published, in the context of the new Guidelines on interest rate risk and credit spread risk in the banking book (EBA/GL/2022/14), Guidelines on Credit Spread Risk in the Banking Book (CSRBB) with an end-of-2023 entry into force.

This derives from Article 84 of the Capital Requirements Directive (CRD) that tasks EBA to define *criteria to assess and monitor the risks arising from potential changes in credit spreads that affect both the economic value of equity and the net interest income of an institution's non-trading book activities.*

This paper describes an **industry common understanding of the CSRBB**.

It is organized in three sections:

- Definition of CSRBB
- Identification of the scope of CSRBB
- Measurement of CSRBB

1. DEFINITION OF CSRBB

The CSRBB is defined by EBA as the:

Risk driven by changes of the market price for credit risk, for liquidity and for potentially other characteristics of credit-risky instruments, which is not captured by another existing prudential framework such as IRRBB or by expected credit/(jump-to-) default risk. CSRBB captures the risk of an instrument's changing spread while assuming the same level of creditworthiness, i.e., how the credit spread is moving within a certain rating / PD range.

Hence, CSRBB relates to:

- credit risky instruments
  - … that are sensitive to credit spread changes
  - … for which market prices for their credit spreads are available
  - … whose market price spread remains within the same level of creditworthiness (i.e., rating)
  - … and that is not already captured in another prudential framework
  - … that may potentially impact the institutions income and / or capital

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CSRBB is further detailed as encompassing the combination of:

- *The changes of the "market credit spread" or "market price of credit risk" (distinct from the idiosyncratic credit spread) representing the credit risk premium required by market participants for a given credit quality;* and
- *The changes of the "market liquidity spread" representing the liquidity premium that sparks market appetite for investments and presence of willing buyers and sellers.*

CSRBB is defined for **a stable business model of the institution** (i.e., not in recovery or resolution management frameworks whereby the business model is envisaged to be adapted).

Hence, CSRBB originates from **Banking Book items** (i.e., assets, liabilities, derivatives and off-balance sheet) that are **sensitive to credit spread changes, i.e., whose pricing is made in relation to a liquid market** whereby *market participants* determine the *market price of credit risk* factoring in a *market liquidity spread* depending on how liquid the market is for the considered item, and that may potentially impact the institutions income and / or capital. The market liquidity translates into the price difference for selling or buying a credit-risky instrument: the more liquid the market the tighter the market liquidity spread.

2. IDENTIFICATION OF THE SCOPE OF CSRBB

As the CSRBB is defined in reference to market prices, each type of Banking Book item is analyzed for being potentially subject to CSRBB according to its **more or less remote connection with an active recognized market such as an exchange market**.

Hence, the process for the systematic identification of items in **the scope of CSRBB follows a gradient approach**:

- starting from instruments that are directly traded on an active recognized market, in the scope of CSRBB;
- to instruments whose pricing may be evidenced as having a *strong and reliable link* with such active recognized markets through a *reference market curve* or a combination of *market reference curves*, in the scope of CSRBB;
- ending with instruments that have no connection to such reference market curves and, thus, are not included in the scope of CSRBB.

This is represented by the **decision tree in Appendix** and described in detail in this section.

All material Banking Book items should be subject to the identification process described below, irrespective of their accounting mode.

There is a presumption that Banking Book items accounted for their fair value through profit and loss statement (FVP&L) or through other comprehensive Income (FVOCI) are in the scope of CSRBB. The presumption may be rebutted if CSRBB cannot be reliably identified as described through the gradient approach.

Illustration:

Market liquid sovereign debt instruments that are held to build up and maintain a liquidity buffer (e.g., Liquidity Coverage Ratio (LCR) buffer) and that are accounted for FVOCI, would be in the scope of CSRBB.

Conversely, some loans may be accounted for FVP&L due to non-Solely Payments of Principal and Interest (SPPI) features and yet may end up not in the scope of CSRBB once the analysis described below is completed (i.e., if there is no strong link to market liquid prices).

For liabilities, CSRBB would relate to the institution's credit risk. Based on the very same reference to the Standard published by the Basel Committee on Banking Supervision (BCBS) in 2016, EBA concluded in its 2018 Guideline that CSRBB relates to assets only. However, the gradient approach described below applies to all Banking Book items, including liabilities. The deterioration of an institution's credit quality should not have a positive impact on the credit spread risk measure by applying a conservative cap at zero for economic value and net interest income metrics.

a. *Instruments Excluded from CSRBB*

Instruments that are subject to or explicitly exempted from[1] own funds requirements for Credit Valuation Adjustment (CVA) are not in the scope of CSRBB.

Hence, derivatives, repos and reverse repos in the Banking Book are not subject to CSRBB. However, the CSRBB-effects of CSRBB-mitigating-instruments (e.g., bond futures, credit default swap, bond forward sales / purchases) that would be executed to mitigate CSRBB, should be recognized in the CSRBB measurements.

Non-Performing Exposures (NPE) are not included in the scope of CSRBB.

b. *Market Liquid Instruments with Direct Reference to Market Prices*

Some instruments in the Banking Book are actively traded on liquid recognized exchange markets. All credit risky instruments listed on recognized exchange markets would be considered as market liquid instruments and would be included in the scope of CSRBB.

Illustration:

High Quality Liquid Assets (HQLA) sovereign debt securities that are held as liquidity buffer to meet the Liquidity Coverage Ratio (LCR) requirement would be covered by CSRBB as since actively traded on large and deep markets.

c. *Instruments with Indirect References to Market Liquid Instruments' Prices*

i. Less Market Liquid Instruments:

Some less market liquid instruments may be priced from very similar market liquid instruments. Those instruments should be included in the scope of CSRBB.

[1] It would be inconsistent to include in CSRBB scope items that the prudential framework exempt from *CVA*.

Illustration:

Off-the-run (old) bond security (e.g., 10 year bond whose residual maturity is one year) may be priced in reference to *on-the-run* (recent) debt securities that benefit from a higher market liquidity (e.g., 1 year bond recently issued).

ii. Pricing Practice:

If the institution bases its origination pricing practice of some Banking Book items on explicit references to prices of market liquid instruments, it could be inferred that the prices of those Banking Book items are related to the market prices of these market liquid instruments. In such situation, the portion of identified Banking Book items whose prices relate to specific market liquid prices would be covered by CSRBB.

Illustration:

Under the Danish balance principle stipulated by local mortgage legislation customer loans are one-to-one represented by market liquid bonds issued in financial markets. Banks only retain a distribution fee (so-called "bidrag") and the credit / default risk while all market risk is reflected in the bonds. Both issued bonds and loans would be included in CSRBB.

iii. Regular Market Transactions:

For some Banking Book items, market prices may be observed through regular transactions hence potentially enabling to include them in CSRBB scope if a link to market liquid instruments may be reliably evidenced (cf. dedicated section below). The Banking Book items should be very similar to those whose market prices are observed. Similarity should be for all characteristics including customer types (e.g., jurisdiction, retail / corporate / financial customers), instrument type (e.g. loan, debt securities), contractual terms (e.g., currency, notional amount, principal payment, maturity, interest rates, embedded option) and credit exposure (e.g., covenants, recourse, probability and loss in case of default).

Illustration:

For an '*originate-to-distribute*' business model which would temporarily warehouse loans until they are sold in the markets, the observed loans' prices might enable to evidence a strong and reliable link to market liquid prices (e.g., sold loans priced in reference to the sovereign asset swap spread). Such an evidenced *strong and reliable link* would lead to include those instruments in the scope of CSRBB.

On the other hand, while a market liquid corporate debt that is hold and accounted for FVOCI would be covered by CSRBB*,* a loan granted to the same corporate, but with different characteristics as the debt (e.g., contractual characteristics, prepayment option, covenants), would not necessarily be included in the scope of CSRBB.

d. No-Reference to Market Liquid Instruments

If not identified as in the scope of CSRBB by the sections above, Banking Book items are not in the scope of CSRBB.

This covers the customers' loans and deposits that are granted and priced by the institutions, without using references to market liquid instruments, with the objective of generating a margin that, together with other sources of revenues, e.g., fees and commissions, enable to cover costs and generate a benefit to the institution. This margin, and the change thereof, would typically be covered by the *business risk* component of the Internal Capital Adequacy Assessment Process (ICAAP) and would cover commercial components that are managed together (e.g., gross operating income and costs).

For business models whereby loans and deposits are made to the very same customer base, it is usual to articulate the pricing of deposits and the pricing of loans to generate a stable margin. Many, if not most of customers' deposits are priced without a reference to credit spread component.

3. CSRBB MEASUREMENT

a. Filtering out non-CSRBB components

To focus on *credit spread* and avoid double counting, *non-credit spread* components should be filtered out of *credit spread* measurement-metrics.

For instance, *credit spread* measurement should exclude the portion that is already covered by IRRBB framework, i.e., risk-free interest rate risk (typically derived from interest rate swaps) and commercial margins[2]. Credit spread measurement should also ideally exclude the migration and *jump to default* components.

However, there are no market reference curves, or combination thereof, that would enable to perfectly align with the definition of *credit spread*. Hence, institutions should define *credit spread* measurement metrics in relation to market reference curve(s) so that they reflect credit spread while avoiding / minimizing overlap with components that are covered by other components of risk management framework (e.g., migration risk and jump-to-default that are considered in credit risk framework, commercial margin and funding costs that don't relate to credit spread to the extent that they are factored in other risk management framework such as business risk).

> *Illustrations:*
>
> Even for the most market liquid instruments, such as sovereign debt instruments, market prices combine credit spread together with migration credit risk, jump-to-default credit risk, interest rate risk and market liquidity spread (e.g., smaller bid / ask spread for on-the-run[3] instrument than for off-the-run[4] instrument). Though the IRRBB-component may be filtered out through swap market reference curves, the obtained residual spread (i.e., asset swap spread) does not perfectly align the credit spread-component. To the extent that the non-credit spread component would be deemed not material, sovereign debt asset swap spreads may be retained as a proxy for credit spread, or if electing to include idiosyncratic elements in the credit spread calculations (subject to yielding more conservative results).

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[2] Referred to notably in: '*§82. When calculating net interest income measures to evaluate IRRBB exposures, institutions <u>should include commercial margins</u>.' or in '§47. The policies should be well reasoned, robust and documented and should address all IRRBB components that are important to the institution's individual circumstances. Without prejudice to the proportionality principle, the IRRBB policies should include the following: […] (m) The internal definition of commercial margins and adequate methodology for internal treatment of commercial margins.*'

[3] Recently issued debt hence benefitting from market liquidity

[4] Debt instruments that have been issued a long time ago and having less market liquidity

b. Reliability Requirement

Reliable measurement is a pre-requisite for the identification of CSRBB and for credit spread measurement.

The methods to identify and measure CSRBB should avoid complex approaches as complexity would be an indication that identified CSRBB is not reliable.

The *market reference curves* to identify CSRBB and measure credit spread should relate to publicly available *market liquid instruments*. The introduction of *market reference curves* that would lack public availability would be an indication that the identification / measurement method has a remote connection with an active recognized market and hence not reliable and appropriate.

The *market reference curves* to identify CSRBB and measure credit spread should be limited in number, e.g., one relevant sovereign debt and/or one swap curve by currency zone that could serve as *base market reference curve(s)*. Adding other *market reference curves* would require to articulate the relationships between the different curves and to evidence that they do not overlap / correlate. The *base market reference curve(s)* should be as wide as possible (e.g., combination of relevant sovereign debt curves and / or swap curve). For a currency zone, the *market reference curves* derived from sovereign debts and / or swap curves would be expected to be deemed relevant *base market reference curve(s)*.

For each currency, other *market reference curves* should be introduced only if

- they are significantly different (i.e., uncorrelated) to the *base market reference curve*(s) and other added *market reference curves* and
- they relate to a significant portion of the Banking Book balance sheet (e.g., greater than 5%).

c. Changes in Economic Value (EV) and in Net Interest Income (NII)

The scope of CSRBB should not be different depending on the considered metric, though the impact of credit spread changes on income or capital may differ between metrics depending on the approach. The instruments that are mitigating CSRBB should be included in the measurement of CSRBB (even though they are not themselves in the scope of CSRBB).

> *Illustrations:*
>
> Change in the market credit spread level can generate an impact on the economic value of an existing Fixed Rate Corporate Bond accounted as amortized cost, but it will have no effect on NII (the coupon received would be not affected by the change). On the other hand, a change in the spread level will have an impact on NII due to the roll-over of assets and liabilities under a constant / dynamic balance sheet assumptions (but not in the economic value as it is generally calculated under a run-off assumption).

Institutions are expected to include in the perimeter *"instruments sensitive, or expected to be sensitive, to volatility in credit spreads that may potentially impact the institutions income and / or capital"*.

Once migration and default risk is excluded from CSRBB, the effect of market credit spread variations for other banking book instruments, accounted at amortized cost and intended to be held to maturity, have no impact on banks' capital.

i. Economic Value sensitivity

EV metrics, which should include at least the Economic Value of Equity (EVE), should comprise the whole scope of CSRBB without distinction between different accounting categories.

For EV metrics, including fair value change component for NII, the envisaged CSRBB-shocks to estimate EV-sensitivities would be applied on the discounting rates.

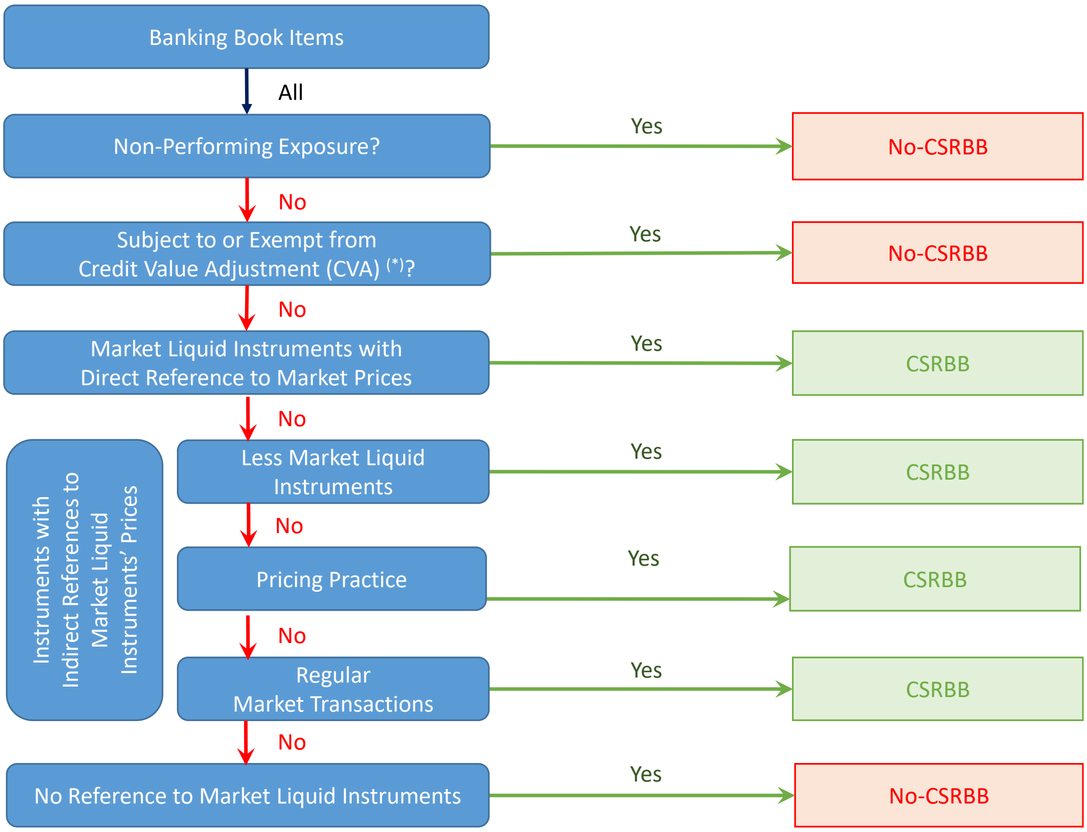
ii. Net Interest Income sensitivity

The impact on NII derives from the roll-over of assets and liabilities in the scope of CSRBB repricing within the time horizon considered by each institution for NII sensitivity analysis as the shocked credit spread conditions applied to the new transactions have an impact on NII.

iii. CSRBB-Shocks

The identification of the credit spread (including or excluding the idiosyncratic component) and their shocks should be in line with the different methodologies developed by the institutions and may be represented by a standard parallel shock such as +1 basis point (bp), usually named CS01 (credit spread sensitivity to 1 basis point shock), or derived from observable *market reference curves'* historical data.

APPENDIX



(*) Instruments that are mitigating CSRBB are considered for CSRBB-measurement