Basel Committee on Banking Supervision

RBC
Risk-based capital requirements

RBC20
Calculation of minimum risk-based capital requirements

Version effective as of 15 Dec 2019

First version in the format of the consolidated framework.
Minimum risk-based capital requirements

20.1 Banks must meet the following requirements at all times:

   1. Common Equity Tier 1 must be at least 4.5% of risk-weighted assets (RWA).
   2. Tier 1 capital must be at least 6% of RWA.
   3. Total capital must be at least 8.0% of RWA.¹

Footnotes

¹ In addition, a Common Equity Tier 1 capital conservation buffer is set at 2.5% of RWA for all banks. Banks may also be subject to a countercyclical capital buffer or higher loss-absorbency requirements for systemically important banks. These buffers are described in RBC30 and RBC40.

20.2 The components of capital referred to in RBC20.1 are defined in CAP10 and must be used net of regulatory adjustments (defined in CAP30) and subject to the transitional arrangements in CAP90. RWA are defined in RBC20.3 and RBC20.4.

Risk-weighted assets

20.3 The Basel framework describes how to calculate RWA for credit risk, market risk and operational risk. The requirements for calculating RWA allow banks to use different approaches, some of which banks may only use with supervisory approval. The nominated approaches of a bank comprise all the approaches that the bank is using to calculate regulatory capital requirements, other than those approaches used solely for the purpose of the capital floor calculation outlined below. The nominated approaches of a bank may include those that it has supervisory approval to use and those for which supervisory approval is not required.

20.4 The RWA that banks must use to determine compliance with the requirements set out in RBC20.1 (and the buffers in RBC30 and RBC40) is the higher of:
(1) the sum of the following elements:

(a) RWA for credit risk;
(b) RWA for market risk; and
(c) RWA for operational risk; and

(2) for banks using the internal ratings-based (IRB) approach for credit risk or the Advanced Measurement Approaches (AMA) for operational risk, the sum of the elements listed in RBC20.4(1) adjusted as required by RBC20.11 to RBC20.16, which describes the capital floor.

Banking book and trading book boundary

20.5 Before a bank can calculate RWA for credit risk and RWA for market risk, it must follow the requirements of [RBC25] to identify the instruments that are in the trading book. The banking book comprises all instruments that are not in the trading book and all other assets of the bank (hereafter “banking book exposures”).

RWA for credit risk

20.6 RWA for credit risk (including counterparty credit risk) is calculated as the sum of:

(1) Credit RWA for banking book exposures, except the RWA listed in (2) to (5) below, calculated using:

   (a) the standardised approach, as set out in [CRE20] to [CRE22]; or
   (b) the IRB approach, as set out in [CRE30] to [CRE36].

(2) RWA for counterparty credit risk arising from banking book exposures and from trading book instruments (as specified in [CRE55]), except the exposures listed in (3) to (6) below, using the methods outlined in [CRE51].
(3) Credit RWA for equity investments in funds that are held in the banking book calculated using one or more of the approaches set out in [CRE60]:

(a) The look-through approach
(b) The mandate-based approach
(c) The fall-back approach

(4) RWA for securitisation exposures held in the banking book, calculated using one or more of the approaches set out in [CRE40] to [CRE44]:

(a) Securitisation Standardised Approach (SEC-SA)
(b) Securitisation External Ratings-Based Approach (SEC-ERBA)
(c) Internal Assessment Approach (IAA)
(d) Securitisation Internal Ratings-Based Approach (SEC-IRBA)
(e) A risk weight of 1250% in cases where the bank cannot use (a) to (d) above.

(5) RWA for exposures to central counterparties in the banking book and trading book, calculated using the approach set out in [CRE54].

(6) RWA for the risk posed by unsettled transactions and failed trades, where these transactions are in the banking book or trading book and are within scope of the rules set out in [CRE70].

20.7 The approaches listed in [RBC20.6] specify how banks must measure the size of their exposures (ie the exposure at default) and determine their RWA. Certain types of exposures in the banking book and trading book give rise to counterparty credit risk for which the measurement of the size of the exposure can be complex (see [CRE51] for an overview of the counterparty credit risk requirements). Therefore, the approaches listed above include, or refer to, the following methods available to determine the size of counterparty credit risk exposures:

(1) The standardised approach for measuring counterparty credit risk exposures (SA-CCR), set out in [CRE52].

(2) The comprehensive approach, set out in [CRE22.40] to [CRE22.76], including the value at risk (VaR) models approach, set out in [CRE22.73] to [CRE22.76].
(3) The internal models method (IMM), set out in [CRE53].

20.8 For banks that have supervisory approval to use IMM, RWA for credit risk must be calculated as the higher of:

(1) the sum of elements (1) to (6) in RBC20.6 calculated using IMM with current parameter calibrations; and

(2) the sum of the elements in RBC20.6 using IMM with stressed parameter calibrations.

RWA for market risk

20.9 RWA for market risk are calculated as the sum of the following:

(1) RWA for market risk for instruments in the trading book and for foreign exchange risk and commodities risk for exposures in the banking book, calculated using:
   (a) the standardised approach, as described in [MAR20]; or
   (b) the internal models approach set out in [MAR30];

(2) RWA for credit valuation adjustment (CVA) risk for exposures in the trading book and banking book, calculated in line with [MAR50] using either:
   (a) the standardised approach for CVA; or
   (b) the advanced approach for CVA.

RWA for operational risk

20.10 RWA for operational risk are calculated using one or more of the following approaches:

(1) the Basic Indicator Approach described in [OPE20]; or

(2) the standardised approaches described in [OPE25]; or

(3) the AMA described in [OPE30].
**Calculation of the capital floor**

**20.11** Banks using the IRB approach for credit risk or the AMA for operational risk are subject to a capital floor.

**20.12** Banks must calculate the difference between

1. the floor amount, as defined in **RBC20.14**, and
2. the comparison amount, as defined in **RBC20.15**.

**20.13** If the floor amount is larger, banks must add 12.5 times the difference in calculating RWA to the sum of RWA for credit risk, market risk and operational risk in order to determine compliance with the minimum capital requirements (as described in **RBC20.4**).

**20.14** The floor amount is calculated as 80% of the following sum, all elements of which are calculated under the 1988 Accord:

1. 8% of RWA; plus
2. Tier 1 and Tier 2 deductions; less
3. the amount of general provisions that have been recognised as Tier 2 capital.

**20.15** The comparison amount is calculated as follows, with all elements calculated according to this framework:

1. 8% of total RWA; less
2. the difference, where positive, between total provisions and expected loss amount as described in [CRE35]); less
3. where a bank uses the standardised approach to credit risk for any portion of its exposures, general provisions that have been recognised as Tier 2 capital for that portion; plus
4. other Tier 1 and Tier 2 deductions.

**20.16** The Committee recognises that floors based on the 1988 Accord will become increasingly impractical to implement over time and therefore believes that supervisors should have the flexibility to develop appropriate bank-by-bank floors, subject to full disclosure of the nature of the floors adopted. Such floors may be based on the approach the bank was using before adoption of the IRB approach and/or AMA.
20.17

One possible alternative floor, for banks not migrating directly to an IRB approach or AMA from rules based on the 1988 Accord, is to calculate the floor based on the non-modelling approach used prior to migration to the IRB approach or AMA. The prior non-modelling approach must be updated to reflect the prevailing Basel capital standards in force at the time of the floor calculation. The use of this alternative is subject to supervisory approval.

20.18 Under this alternative, the floor amount defined in RBC20.14 is instead calculated as 80% of:

(1) 8% of the sum of:

   (a) RWA for credit risk, calculated as in RBC20.6 to RBC20.8 but without using the IRB approach in RBC20.6(1);

   (b) RWA for market risk, calculated as in RBC20.9; and

   (c) RWA for operational risk, calculated as in RBC20.10 but without using the AMA in RBC20.10(3); plus;

(2) deductions from capital made under CAP30; less

(3) the amount of general provisions that may be recognised in Tier 2.