

LEVERAGE RATIO

Introduction

1. Excessive accumulation of leverage in the banking system was one of the underlying causes of the financial crisis in the banking system, and increased banks' sensitivity to changes in markets and economic conditions. In many cases, excessive leverage built up despite strong risk-based capital ratios.
2. This Directive establishes a leverage ratio that is simple, transparent, non-risk based, which will act as a complementary and reliable measure to the risk-based capital requirements. The leverage ratio is intended to limit the build-up of leverage in a banking corporation in order to avoid destabilizing deleveraging processes that can damage the financial system and the economy, and to reinforce the risk-based capital requirements.
3. Repealed.¹
4. Repealed.
5. Repealed.

Calculation and limitation

6. The leverage ratio is defined as the capital measure (the numerator) divided by the exposure measure (the denominator), with this ratio expressed as a percentage:

$$\text{Leverage ratio} = \frac{\text{Capital measure}}{\text{Exposure measure}}$$

7. The banking corporation shall maintain a leverage ratio of not less than 5 percent on a consolidated basis. A banking corporation whose total balance sheet assets on a consolidated basis are greater than 24 percent or more of total balance sheet assets of the banking system, shall maintain a leverage ratio of not less than 6 percent.

Application

¹ Repealed.

8. This Directive shall be implemented on a consolidated basis as detailed in Section 20 of Proper Conduct of Banking Business Directive 201.²
9. When a banking corporation invests in a banking, financial, insurance or commercial entity that is not consolidated in the banking corporation's reports to the public, only the investment in the capital of such entities (i.e., only the carrying value of the investment, as opposed to the underlying assets and other exposures of the investee) is to be included in the leverage ratio exposure measure. However, investments in the capital of such entities that are deducted from Tier 1 capital as set out in Section 16 below may be excluded from the leverage ratio exposure measure.

Capital measure

10. The capital measure for the leverage ratio is Tier 1 capital as defined in Proper Conduct of Banking Business Directive 202 (Regulatory Capital)³, taking account of the transitional arrangements. Therefore, the capital measure used for the leverage ratio at any particular point in time is the Tier 1 capital measure applying at that time under the risk-based framework.
11. Repealed.

Exposure measure

12. The exposure measure for the leverage ratio should generally follow the accounting value, subject to the following:
 - on-balance sheet, non-derivative exposures are included in the exposure measure net of specific provisions or accounting valuation adjustments (e.g., accounting credit valuation adjustments);
 - netting of loans and deposits is not allowed.
13. Unless specified differently below, banking corporations must not take account of physical or financial collateral, guarantees or other credit risk mitigation techniques to reduce the exposure measure.

² Repealed.

³ Repealed.

Total exposure measure

14. A banking corporation's total exposure measure is the sum of the following exposures:

- (a) on-balance sheet exposures;
- (b) derivative exposures;
- (c) securities financing transaction (SFT) exposures; and
- (d) off-balance sheet (OBS) items.

The specific treatments for these four main exposure types are defined below.

(a) On-balance sheet exposures

15. Banking corporations must include all balance sheet assets in their exposure measure, including on-balance sheet derivatives collateral and collateral for SFTs, with the exception of on-balance sheet derivative and SFT assets that are covered in paragraphs 18–37 below.⁴

16. However, to ensure consistency, balance sheet assets deducted from Tier 1 capital (as set out in Sections 5–6 and 13 of Proper Conduct of Banking Business Directive 202) may be deducted from the exposure measure. Two examples follow:

- Where a banking, financial or insurance entity is not consolidated in the reports to the public as set out in Section 8 above, the amount of any investment in the capital of that entity that is totally or partially deducted from Common Equity Tier 1 capital or from Additional Tier 1 capital of the bank following the corresponding deduction approach in Sections 6.b and 13 of Proper Conduct of Banking Business Directive 202, may also be deducted from the exposure measure.
- Banking corporations using the internal ratings-based (IRB) approach to determining capital requirements for credit risk must deduct any shortfall in the stock of eligible provisions relative to expected losses from Common Equity Tier 1 capital, in accordance

⁴ Repealed.

with Proper Conduct of Banking Business Directive 202. The same amount may be deducted from the exposure measure.

17. Liability items must not be deducted from the measure of exposure. For example, gains/losses on fair valued liabilities or accounting value adjustments on derivative liabilities due to changes in the banking corporation's own credit risk as described in Section 5(f) of Proper Conduct of Banking Business Directive 202 must not be deducted from the exposure measure.

(b) Derivative exposures

(i) Treatment of derivatives:

18. Derivatives create two types of exposure:

- a. an exposure arising from the underlying of the derivative contract; and
- b. a counterparty credit risk (CCR) exposure.

The leverage ratio framework uses the method set out below to capture both of these exposure types.

19. Banking corporations must calculate their derivative exposures (single exposure to derivatives as well as exposures to derivatives covered by an eligible bilateral netting contract)⁵, including when the banking corporation sells protection via a credit derivative, in accordance with the Current Exposure Method (CEM) as specified in Appendix C of Proper Conduct of Banking Business Directive 203.^{6,7}

Written credit derivatives are subject to an additional treatment, as set out in Sections 29 to 31 below.

20. Repealed.

21. Repealed

(ii) Treatment of related collateral

22. Collateral received in connection with derivative contracts has two countervailing effects on leverage:

⁵ Repealed.

⁶ Repealed.

⁷ Repealed.

- it reduces counterparty exposure; but
- it can also increase the economic resources at the disposal of the bank, as the bank can use the collateral to leverage itself.

23. **Collateral received** in connection with derivative contracts does not necessarily reduce the leverage inherent in a bank's derivatives position, which is generally the case if the settlement exposure arising from the underlying derivative contract is not reduced. As a general rule, collateral received may not be netted against derivative exposures, whether or not netting is permitted under the Reporting to the Public Directives or in accordance with Proper Conduct of Banking Business Directive 203. Hence, when calculating the exposure amount as noted above, a banking corporation must not reduce the exposure amount by any collateral received from the counterparty.
24. Similarly, with regard to **collateral provided**, banking corporations must gross up their exposure measure by the amount of any derivatives collateral provided where the provision of that collateral has reduced the value of their balance sheet assets under the Reporting to the Public Directives.

(iii) Treatment of cash variation margin:

25. In the treatment of derivative exposures for the purpose of the leverage ratio, the cash portion of variation margin exchanged between counterparties may be viewed as a form of pre-settlement payment, if the following conditions are met:
- (i) For trades not cleared through a qualifying central counterparty (QCCP)⁸, the cash received by the recipient counterparty is not segregated.
 - (ii) Variation margin is calculated and exchanged on a daily basis based on mark-to-market valuation of derivatives positions.
 - (iii) The cash variation margin is received in the same currency as the currency of settlement of the derivative contract.
 - (iv) Variation margin exchanged is the full amount that would be necessary to fully extinguish the mark-to-market exposure of the

⁸ Repealed.

derivative subject to the threshold and minimum transfer amounts applicable to the counterparty.

- (v) Derivatives transactions and variation margins are covered by a single master netting agreement (MNA)^{9,10} between the legal entities that are the counterparties in the derivatives transaction. The MNA must explicitly stipulate that the counterparties agree to settle net any payment obligations covered by such a netting agreement, taking into account any variation margin received or provided if a credit event occurs involving either counterparty. The MNA must be legally enforceable and effective in all relevant jurisdictions, including in the event of default and bankruptcy or insolvency.

26. If the conditions in Section 25 are met, the cash portion of variation margin *received* may be used to reduce the replacement cost portion of the leverage ratio exposure measure, and the receivables assets from cash variation margin *provided* may be deducted from the leverage ratio exposure measure as follows:

- In the case of cash variation margin *received*, the receiving banking corporation may reduce the replacement cost (but not the add-on portion) of the exposure amount of the derivative asset by the amount of cash received if the positive mark-to-market value of the derivative contract(s) has not already been reduced by the same amount of cash variation margin received in accordance with the Reporting to the Public Directives.
- In the case of cash variation margin provided to a counterparty, the posting banking corporation may deduct the resulting receivable from its leverage ratio exposure measure, where the cash variation margin has been recognized as an asset in accordance with the Reporting to the Public Directives.

Cash variation margin may not be used to reduce the PFE (potential future exposure) amount (including the calculation of the net-to-gross ratio (NGR) as defined in Proper Conduct of Banking Business Directive 203, Appendix C, Section 96(iv).

⁹ An MNA may be deemed to be a single MNA for this purpose.

¹⁰ To the extent that the criteria in this section include the term “master netting agreement”, this term should be read as including any “netting agreement” that provides legally enforceable rights of offsets. This is to take account of the fact that for netting agreements employed by CCPs, no standardization has currently emerged that would be comparable with respect to OTC netting agreements for bilateral trading.

(iv) Treatment of clearing services:

27. Where a banking corporation acting as clearing member (CM)¹¹ offers clearing services to clients, the clearing member's trade exposures¹² to the central counterparty (CCP) that arise when the clearing member is obligated to reimburse the client for any losses suffered due to changes in the value of its transactions in the event that the CCP defaults, must be captured by applying the same treatment that applies to any other type of derivatives transactions. However, if the clearing member, based on the contractual arrangements with the client, is not obligated to reimburse the client for any losses suffered due to changes in the value of its transactions in the event that a QCCP defaults, the clearing member need not recognize the resulting trade exposures to the QCCP in the leverage ratio exposure measure.

28. Where a client enters directly into a derivatives transaction with the CCP and the CM guarantees the performance of its clients' derivative trade exposures to the CCP, the banking corporation acting as the clearing member for the client to the CCP must calculate its related leverage ratio exposure resulting from the guarantee as a derivative exposure as set out in Sections 19–26, as if it had entered directly into the transaction with the client, including with regard to the receipt or provision of cash variation margin.

(v) Additional treatment for written credit derivatives:

29. In addition to the CCR exposure arising from the fair value of the contracts, written credit derivatives create a notional credit exposure arising from the creditworthiness of the reference entity. Therefore written credit derivatives are to be treated in a manner consistent with cash instruments (loans, bonds) for the exposure measure.

30. In order to capture the credit exposure to the underlying reference entity, in addition to the above CCR treatment for derivatives and related collateral,

¹¹ For the purposes of this section, a clearing member (CM) is defined as in a draft on exposure to central counterparty.

¹² For the purposes of Sections 27 and 28, "trade exposures" includes initial margin irrespective of whether or not it is posted in a manner that makes it remote from the insolvency of the CCP.

the effective notional amount¹³ referenced by a written credit derivative is to be included in the exposure measure. The effective notional amount of a written credit derivative may be reduced by any negative change in fair value amount that has been incorporated into the calculation of Tier 1 capital with respect to the written credit derivative. The resulting amount may be further reduced by the effective notional amount of a purchased credit derivative on the same reference name^{14,15} provided:

- the credit protection purchased is on a reference obligation which ranks pari passu with or is junior to the underlying reference obligation of the written credit derivative in the case of single name credit derivatives¹⁶; and
- the remaining maturity of the credit protection purchased is equal to or greater than the remaining maturity of the written credit derivative.

¹³ The effective notional amount is obtained by adjusting the notional amount to reflect the true exposure of contracts that are leveraged or otherwise enhanced by the structure of the transaction.

¹⁴ Two reference names are considered identical only if they refer to the same legal entity. For single-name credit derivatives, protection purchased that references a subordinated position may offset protection sold on a more senior position of the same reference entity as long as a credit event on the senior reference asset would result in a credit event on the subordinated reference asset. Protection purchased on a pool of reference entities may offset protection sold on individual reference names if the protection purchased is economically equivalent to buying protection separately on each of the individual names in the pool (this would, for example, be the case if a bank were to purchase protection on an entire securitization structure). If a bank purchases protection on a pool of reference names, but the credit protection does not cover the entire pool (i.e., the protection covers only a subset of the pool, as in the case of an nth-to-default credit derivative or a securitization tranche), then offsetting is not permitted for the protection sold on individual reference names. However, such purchased protections may offset sold protections on a pool provided the purchased protection covers the entirety of the subset of the pool on which protection has been sold. In other words, offsetting may only be recognized when the pool of reference entities and the level of subordination in both transactions are identical.

¹⁵ The effective notional amount of a written credit derivative may be reduced by any negative change in fair value reflected in the bank's Tier 1 capital provided the effective notional amount of the offsetting purchased credit protection is also reduced by any resulting positive change in fair value reflected in Tier 1 capital. Where a bank buys credit protection through a total return swap (TRS) and records the net payments received as net income, but does not record offsetting deterioration in the value of the written credit derivative (either through reductions in fair value or by an addition to reserves) reflected in Tier 1 capital, the credit protection will not be recognized for the purpose of offsetting the effective notional amounts related to written credit derivatives.

¹⁶ For tranching products, the purchased protection must be on a reference obligation with the same level of seniority.

31. Since written credit derivatives are included in the exposure measure at their effective notional amounts, and are also subject to add-on amounts for PFE (potential future exposure), the exposure measure for written credit derivatives may be overstated. Banking corporations may therefore choose to deduct the individual PFE add-on amount relating to a written credit derivative (which is not offset according to Section 30 and whose effective notional amount is included in the exposure measure) from their gross add-on in Sections 19–21.¹⁷

(c) Security Financing Transactions Exposures (SFTs)

32. SFTs¹⁸ are included in the exposure measure according to the treatment described below. The treatment recognizes that secured lending and borrowing in the form of SFTs is an important source of leverage, and ensures consistent international implementation by providing a common measure for dealing with the main differences in the Reporting to the Public Directives.

(i) General treatment (banking corporation acting as principal):

33. When a banking corporation acts as a principal, the sum of the amounts in Subsections (i) and (ii) below are to be included in the leverage ratio exposure measure:

(i) Gross SFT assets¹⁹ recognized for accounting purposes (i.e., with no recognition of accounting netting)²⁰, adjusted as follows:

¹⁷ In these cases, where effective bilateral netting contracts are in place, and when calculating A_{Net} , A_{Gross} may be reduced by the individual add-on amounts (i.e., notionals multiplied by the appropriate add-on factors) which relate to written credit derivatives whose notional amounts are included in the leverage ratio exposure measure. However, no adjustments must be made to NGR. Where effective bilateral netting contracts are not in place, the PFE add-on may be set to zero in order to avoid the double-counting described in this section.

¹⁸ SFTs are transactions such as repurchase agreements, reverse repurchase agreements, security lending and borrowing, and margin lending transactions, where the value of the transactions depends on market valuations and the transactions are often subject to margin agreements.

¹⁹ For SFT assets subject to novation and cleared through QCCPs, “gross SFT assets recognized for accounting purposes” are replaced by the final contractual exposure, given that pre-existing contracts have been replaced by new legal obligations through the novation process.

²⁰ Gross SFT assets recognized for accounting purposes must not recognize any accounting netting of cash payables against cash receivables (e.g., as currently permitted under the

- excluding from the exposure measure the value of any securities received under an SFT, where the bank has recognized the securities as an asset on its balance sheet²¹; and
 - cash payables and cash receivables^{21a} in SFTs with the same counterparty may be measured net if all the following criteria are met:
 - (a) Transactions have the same explicit final settlement date;
 - (b) The right to set off the amount owed to the counterparty with the amount owed by the counterparty is legally enforceable both currently in the normal course of business and in the event of: (i) default; (ii) insolvency; and (iii) bankruptcy; and
 - (c) The counterparties intend to settle net, settle simultaneously, or the transactions are subject to a settlement mechanism that results in the functional equivalent of net settlement, that is, the cash flows of the transactions are equivalent, in effect, to a single net amount on the settlement date. To achieve such equivalence, both transactions are settled through the same settlement system and the settlement arrangements are supported by cash and/or intraday credit facilities intended to ensure that settlement of both transactions will occur by the end of the business day and the linkages to collateral flows do not result in the unwinding of net cash settlement.²²
- (ii) A measure of CCR calculated as the current exposure without an add-on for PFE, calculated as follows:
- Where a qualifying MNA is in place²³, the current exposure (E^*) is the greater of zero and the total fair value of securities and cash lent to a counterparty for all transactions included in the qualifying MNA (Σ^{Ei}), less the total fair value of cash and securities received from the

Reporting to the Public Directives). This regulatory treatment has the benefit of avoiding inconsistencies from netting which may arise across different accounting regimes.

²¹ This may apply, for example, under the Reporting to the Public Directives where securities received under an SFT may be recognized as assets if the recipient has the right to rehypothecate but has not done so. See Reporting to the Public Directives, Annual Financial Statement, Footnote to Section 21.15.

^{21a} The reference is to sections in the Reporting to the Public Directives: “Securities Lent or Borrowed under Repurchase Agreements”, “Securities Borrowed or Sold under Reverse Repurchase Agreements”.

²² This final condition ensures that all the issues deriving from the securities leg of the SFTs do not adversely impact the completing of final settlement of cash receivables or payables.

²³ Qualifying MNA is one that meets the requirements of Sections 173–174 of Proper Conduct of Banking Business Directive 203.

counterparty for those transactions (Σ^{C_i}). This is illustrated in the following formula:

$$E^* = \max \{0, [\Sigma^{E_i} - \Sigma^{C_i}]\}$$

- Where no qualifying MNA is in place, the current exposure for transactions with a counterparty must be calculated on a transaction by transaction basis: that is, each transaction i is treated as its own netting set, as shown in the following formula:

$$E_i^* = \max \{0, [E_i - C_i]\}$$

(ii) *Sale accounting transactions:*

34. Leverage may remain with the lender of the security in an SFT whether or not sale accounting is achieved in accordance with the Reporting to the Public Directives. As such, where sale accounting is achieved for an SFT as noted, the banking corporation must reverse all sales-related accounting entries, and then calculate its exposure as if the SFT had been treated as a financing transaction in accordance with the Reporting to the Public Directives (i.e., the banking corporation must include the sum of amounts in Subsections (i) and (ii) of paragraph 33 for such an SFT) for the purposes of determining its exposure measure.

(iii) *Bank acting as agent:*

35. A banking corporation acting as agent in an SFT generally provides an indemnity or guarantee to only one of the two parties involved, and only for the difference between the value of the security or cash its customer has lent and the value of collateral the borrower has provided. In this situation, the banking corporation is exposed to the counterparty of its customer for the difference in values rather than to the full exposure to the underlying security or cash of the transaction (as is the case where the banking corporation is one of the principals in the transaction). Where the banking corporation does not own/control the underlying cash or security resource, that resource cannot be leveraged by the banking corporation.
36. Where a banking corporation acting as agent in an SFT provides an indemnity or guarantee to a customer or counterparty for any difference between the value of the security or cash the customer has lent and the value of collateral the borrower has provided, then the banking

corporation will be required to calculate its exposure measure by applying only Subsection (ii) of Section 33.²⁴

37. A banking corporation acting as agent in an SFT and providing an indemnity or guarantee to a customer or counterparty will be considered eligible for the exceptional treatment set out in Section 36 *only* if the banking corporation's exposure to the transaction is limited to the guaranteed difference between the value of the security or cash its customer has lent and the value of the collateral the borrower has provided. In situations where the banking corporation is further economically exposed (i.e., beyond the guarantee for the difference) to the underlying security or cash in the transaction²⁵, a further exposure equal to the full amount of the security or cash must be included in the exposure measure.

(d) Off-balance sheet items

38. Repealed.
39. Off-balance sheet items are converted into credit exposure equivalents through the use of credit conversion factors (CCFs). For the purpose of determining the exposure amount of off-balance sheet items for the leverage ratio, the CCFs set out in Sections 82–89 of Proper Conduct of Banking Business Directive 203 must be applied to the notional amount.
- 39a. All off-balance sheet securitization exposures will receive credit conversion factors (CCFs) as detailed in Sections 576–582 of Proper Conduct of Banking Business Directive 205.

²⁴ Where, in addition to the conditions in Sections 35–37, a banking corporation acting as an agent in an SFT does not provide an indemnity or guarantee to any of the involved parties, the bank is not exposed to the SFT and therefore need not recognize those SFTs in its exposure measure.

²⁵ For example, due to the bank managing collateral received in the bank's name or on its own account rather than on the customer's or borrower's account (e.g., by on-lending or managing unsegregated collateral, cash or securities).

Revisions

Circular 06 number	Version	Details	Date
2460	1	Original Directive	April 28, 2015
2607	2	Update	March 1, 2020