

Directive 2006/48/EC of the European Parliament and of the council
of 14 June 2006 relating to the taking up and pursuit of the business
of credit institutions (recast) (Text with EEA relevance) (repealed)

ANNEX VII

INTERNAL RATINGS BASED APPROACH

PART 2

PD, LGD and Maturity

1. The input parameters PD, LGD and maturity value (M) into the calculation of risk weighted exposure amounts and expected loss amounts specified in Part 1 shall be those estimated by the credit institution in accordance with Part 4, subject to the following provisions.
 1. EXPOSURES TO CORPORATES, INSTITUTIONS AND CENTRAL GOVERNMENTS AND CENTRAL BANKS
 - 1.1. PD
 2. The PD of an exposure to a corporate or an institution shall be at least 0,03 %.
 3. For purchased corporate receivables in respect of which a credit institution cannot demonstrate that its PD estimates meet the minimum requirements set out in Part 4, the PDs for these exposures shall be determined according to the following methods: for senior claims on purchased corporate receivables PD shall be the credit institutions estimate of EL divided by LGD for these receivables. For subordinated claims on purchased corporate receivables PD shall be the credit institution's estimate of EL. If a credit institution is permitted to use own LGD estimates for corporate exposures and it can decompose its EL estimates for purchased corporate receivables into PDs and LGDs in a reliable manner, the PD estimate may be used
 4. The PD of obligors in default shall be 100 %.
 5. Credit institutions may recognise unfunded credit protection in the PD in accordance with the provisions of Articles 90 to 93. For dilution risk, however, competent authorities may recognise as eligible unfunded credit protection providers other than those indicated in Annex VIII, Part 1.
 6. Credit institutions using own LGD estimates may recognise unfunded credit protection by adjusting PDs subject to point 10.
 7. For dilution risk of purchased corporate receivables, PD shall be set equal to EL estimate for dilution risk. If a credit institution is permitted to use own LGD estimates for corporate exposures and it can decompose its EL estimates for dilution risk of purchased corporate receivables into PDs and LGDs in a reliable manner, the PD estimate may be used. Credit institutions may recognise unfunded credit protection in the PD in accordance with the provisions of Articles 90 to 93. Competent authorities may recognise as eligible unfunded credit protection providers other than those indicated in Annex VIII, Part 1. If a credit institution is permitted to use own LGD estimates for dilution risk of purchased corporate receivables, it may recognise unfunded credit protection by adjusting PDs subject of point 10.
 - 1.2. LGD
 8. Credit institutions shall use the following LGD values:
 - (a) Senior exposures without eligible collateral: 45 %;

- (b) Subordinated exposures without eligible collateral: 75 %;
- (c) Credit institutions may recognise funded and unfunded credit protection in the LGD in accordance with Articles 90 to 93;
- (d) Covered bonds as defined in Annex VI, Part 1, points 68 to 70 may be assigned an LGD value of 12,5 %;
- (e) For senior purchased corporate receivables exposures where a credit institution cannot demonstrate that its PD estimates meet the minimum requirements set out in Part 4: 45 %;
- (f) For subordinated purchased corporate receivables exposures where a credit institution cannot demonstrate that its PD estimates meet the minimum requirements set out in Part 4: 100 %; and
- (g) For dilution risk of purchased corporate receivables: 75 %.

Until 31 December 2010, covered bonds as defined in Annex VI, Part 1, points 68 to 70 may be assigned an LGD value of 11,25 % if:

- assets as set out in Annex VI, Part 1, point 68(a) to (c) collateralising the bonds all qualify for credit quality step 1 as set out in that Annex;
- where assets set out in Annex VI, Part 1, point 68(d) and (e) are used as collateral, the respective upper limits laid down in each of those points is 10 % of the nominal amount of the outstanding issue;
- assets as set out in Annex VI, Part 1, point 68(f) are not used as collateral; or
- the covered bonds are the subject of a credit assessment by a nominated ECAI, and the ECAI places them in the most favourable category of credit assessment that the ECAI could make in respect of covered bonds.

By 31 December 2010, this derogation shall be reviewed and consequent to such review the Commission may make proposals in accordance with the procedure referred to in Article 151(2).

- 9. Notwithstanding point 8, for dilution and default risk if a credit institution is permitted to use own LGD estimates for corporate exposures and it can decompose its EL estimates for purchased corporate receivables into PDs and LGDs in a reliable manner, the LGD estimate for purchased corporate receivables may be used.
 - 10. Notwithstanding point 8, if a credit institution is permitted to use own LGD estimates for exposures to corporates, institutions, central governments and central banks, unfunded credit protection may be recognised by adjusting PD and/or LGD subject to minimum requirements as specified in Part 4 and approval of competent authorities. A credit institution shall not assign guaranteed exposures an adjusted PD or LGD such that the adjusted risk weight would be lower than that of a comparable, direct exposure to the guarantor.
 - 11. Notwithstanding points 8 and 10, for the purposes of Part 1, point 4, the LGD of a comparable direct exposure to the protection provider shall either be the LGD associated with an unhedged facility to the guarantor or the unhedged facility of the obligor, depending upon whether in the event both the guarantor and obligor default during the life of the hedged transaction, available evidence and the structure of the guarantee indicate that the amount recovered would depend on the financial condition of the guarantor or obligor, respectively.
- 1.3. Maturity

12. Subject to point 13, credit institutions shall assign to exposures arising from repurchase transactions or securities or commodities lending or borrowing transactions a maturity value (M) of 0,5 years and to all other exposures an M of 2,5 years. Competent authorities may require all credit institutions in their jurisdiction to use M for each exposure as set out under point 13.
13. Credit institutions permitted to use own LGDs and/or own conversion factors for exposures to corporates, institutions or central governments and central banks shall calculate M for each of these exposures as set out in (a) to (e) and subject to points 14 to 16. In all cases, M shall be no greater than 5 years:
- (a) For an instrument subject to a cash flow schedule, M shall be calculated according to the following formula:
- $$M = \text{MAX} \left\{ 1; \text{MIN} \left\{ \frac{\sum_t CF_t}{\sum CF_t}, 5 \right\} \right\}$$
- where CF_t denotes the cash flows (principal, interest payments and fees) contractually payable by the obligor in period t;
- (b) For derivatives subject to a master netting agreement, M shall be the weighted average remaining maturity of the exposure, where M shall be at least 1 year. The notional amount of each exposure shall be used for weighting the maturity;
- (c) For exposures arising from fully or nearly-fully collateralised derivative instruments (listed in Annex IV) transactions and fully or nearly-fully collateralised margin lending transactions which are subject to a master netting agreement, M shall be the weighted average remaining maturity of the transactions where M shall be at least 10 days. The notional amount of each transaction shall be used for weighting the maturity;
- (d) If a credit institution is permitted to use own PD estimates for purchased corporate receivables, for drawn amounts M shall equal the purchased receivables exposure weighted average maturity, where M shall be at least 90 days. This same value of M shall also be used for undrawn amounts under a committed purchase facility provided the facility contains effective covenants, early amortisation triggers, or other features that protect the purchasing credit institution against a significant deterioration in the quality of the future receivables it is required to purchase over the facility's term. Absent such effective protections, M for undrawn amounts shall be calculated as the sum of the longest-dated potential receivable under the purchase agreement and the remaining maturity of the purchase facility, where M shall be at least 90 days;
- (e) For any other instrument than those mentioned in this point or when a credit institution is not in a position to calculate M as set out in (a), M shall be the maximum remaining time (in years) that the obligor is permitted to take to fully discharge its contractual obligations, where M shall be at least 1 year ;
- (f) for credit institutions using the Internal Model Method set out in Annex III, Part 6 to calculate the exposure values, M shall be calculated for exposures to which they apply this method and for which the maturity of the longest-dated contract contained in the netting set is greater than one year according to the following formula:

$$M = \text{MIN} \left(\frac{\sum_{k=1}^{ik \leq 1 \text{ year}} \text{Effective} EE_k \cdot \Delta t_k \cdot df_k + \sum_{k=1}^{\text{maturity}} \text{Effective} EE_k \cdot \Delta t_k \cdot df_k}{\sum_{k=1}^{ik \leq 1 \text{ year}} \text{Effective} EE_k \cdot \Delta t_k \cdot df_k} ; 5 \right)$$

where:

df = the risk-free discount factor for future time period t_k and the remaining symbols are defined in Annex III, Part 6.

Notwithstanding the first paragraph of point 13(f), a credit institution that uses an internal model to calculate a one-sided credit valuation adjustment (CVA) may use, subject to the approval of the competent authorities, the effective credit duration estimated by the internal model as M .

Subject to paragraph 14, for netting sets in which all contracts have an original maturity of less than one year the formula in point (a) shall apply; and

(g) for the purposes of Part 1, point 4, M shall be the effective maturity of the credit protection but at least 1 year.

14. Notwithstanding point 13(a), (b), (d) and (e), M shall be at least one-day for:
- fully or nearly-fully collateralised derivative instruments listed in Annex IV;
 - fully or nearly-fully collateralised margin lending transactions; and
 - repurchase transactions, securities or commodities lending or borrowing transactions

provided the documentation requires daily re-margining and daily revaluation and includes provisions that allow for the prompt liquidation or setoff of collateral in the event of default or failure to re-margin.

In addition, for other short-term exposures specified by the competent authorities which are not Part of the credit institution's ongoing financing of the obligor, M shall be at least one-day. A careful review of the particular circumstances shall be made in each case.

15. The competent authorities may allow for exposures to corporates situated in the Community and having consolidated sales and consolidated assets of less than EUR 500 million the use of M as set out in point 12. Competent authorities may replace EUR 500 million total assets with EUR 1 000 million total assets for corporates which primarily invest in real estate.

16. Maturity mismatches shall be treated as specified in Articles 90 to 93.

2. RETAIL EXPOSURES

2.1. PD

17. The PD of an exposure shall be at least 0,03 %.

18. The PD of obligors or, where an obligation approach is used, of exposures in default shall be 100 %.

19. For dilution risk of purchased receivables PD shall be set equal to EL estimates for dilution risk. If a credit institution can decompose its EL estimates for dilution risk of purchased receivables into PDs and LGDs in a reliable manner, the PD estimate may be used.

20. Unfunded credit protection may be recognised as eligible by adjusting PDs subject to point 22. For dilution risk, where credit institutions do not use own estimates of LGDs, this shall be subject to compliance with Articles 90 to 93; for this purpose competent authorities may recognise as eligible unfunded protection providers other than those indicated in Annex VIII, Part 1.

2.2. LGD

21. Credit institutions shall provide own estimates of LGDs subject to minimum requirements as specified in Part 4 and approval of competent authorities. For dilution risk of purchased receivables, an LGD value of 75 % shall be used. If a credit institution can decompose its EL estimates for dilution risk of purchased receivables into PDs and LGDs in a reliable manner, the LGD estimate may be used.
22. Unfunded credit protection may be recognised as eligible by adjusting PD or LGD estimates subject to minimum requirements as specified in Part 4, points 99 to 104 and approval of competent authorities either in support of an individual exposure or a pool of exposures. A credit institution shall not assign guaranteed exposures an adjusted PD or LGD such that the adjusted risk weight would be lower than that of a comparable, direct exposure to the guarantor.
23. Notwithstanding point 22, for the purposes of Part 1, point 11 the LGD of a comparable direct exposure to the protection provider shall either be the LGD associated with an unhedged facility to the guarantor or the unhedged facility of the obligor, depending upon whether, in the event both the guarantor and obligor default during the life of the hedged transaction, available evidence and the structure of the guarantee indicate that the amount recovered would depend on the financial condition of the guarantor or obligor, respectively.

3. EQUITY EXPOSURES SUBJECT TO PD/LGD METHOD

3.1. PD

24. PDs shall be determined according to the methods for corporate exposures.

The following minimum PDs shall apply:

- (a) 0,09 % for exchange traded equity exposures where the investment is part of a long# term customer relationship;
- (b) 0,09 % for non-exchange traded equity exposures where the returns on the investment are based on regular and periodic cash flows not derived from capital gains;
- (c) 0,4 % for exchange traded equity exposures including other short positions as set out in part 1, point 20; and
- (d) 1,25 % for all other equity exposures including other short positions as set out in Part 1, point 20.

3.2. LGD

25. Private equity exposures in sufficiently diversified portfolios may be assigned an LGD of 65 %.

26. All other exposures shall be assigned an LGD of 90 %.

3.3. Maturity

27. M assigned to all exposures shall be 5 years.