

Luxembourg, 19 December 2018

To all banks issuing covered bonds

CIRCULAR CSSF 18/705

Re: General valuation principles, introduced by the Law of 22 June 2018, to be applied for the determination of the fair value of renewable energy assets that are eligible assets for the cover pool of covered bond banks.

Ladies and Gentlemen,

The purpose of this circular is to put into force prudent valuation standards applicable to the valuation of renewable energy projects that are part of the cover pool of a covered bond bank. Based on Article 12-5 (7) and Article 12-7 (2) of the Law of 22 June 2018, amending the Law of 5 April 1993 on the financial sector, as amended, with respect to the introduction of renewable energy covered bonds, the CSSF is required to provide details on prudent valuation standards to be applied to renewable energy (hereinafter “RE”) projects that are part of the cover pool of a covered bond bank. Although the outlined valuation standards are based on guidelines and principles defined by internationally recognised institutions, they shall be considered as minimum standards applicable to covered bond banks (hereinafter “CBB”). As a result, they do not represent an exhaustive list of principles. The bank shall assess and document whether the application of additional and complementary principles might be appropriate or even required for the valuation of a specific renewable energy project.

The valuation standards defined by the circular are those applicable to the determination of fair value (FV) of individual renewable energy projects, where FV is defined according to International Financial Reporting Standards (IFRS 13).

1 Definitions

1. In the context of this circular, FV is defined according to IFRS 13 as “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date”. The FV forms the basis for all other valuation indicators used in the context of covered bond issuance, such as the estimated realisation value (ERV/“Beleihungswert”), the collateral value (CV) and the cover pool value (CPV). CPV means the asset related credit exposure in the cover pool, which is limited to the CV, whereas CV shall mean ERV after the application of haircuts prescribed in Article 12-5 (7) of the Law of 22 June 2018.
2. The ERV is the sustainable lending value and is calculated from all discounted operating free cash flows generated by the project-related production or technical units by applying project specific risk-adjusted discount rates. The ERV shall cover all relevant risks of the underlying RE project to derive the project specific sustainable CV and has to represent the residual project lifetime. Consequently, the ERV, defined as the value prior to the application of haircuts prescribed in Article 12-5 (7) of the Law, shall not exceed the FV of the RE project.

2 Minimum valuation principles

2.1 Independence, qualification and responsibility of the appraiser

3. The process of selection of the appraiser of the RE projects by the CBB shall be based on a number of principles:
 - i. The selected appraiser must be operationally independent from any banking activities that are directly related to the underlying RE project, such as the credit-decision process or the issuance of the covered bonds. In general, the bank has to get sufficient comfort that the selected appraiser does not have any potential conflicts of interest that could materially distort the valuation process of the RE project. Moreover, it must be excluded that the appraiser has any legal relationships with the operator of the RE project (including the beneficial owner) or any other economic interests in the project. The selected appraiser can be an employee of the bank. Retained appraisers that are employed by the bank are subject to a number of independence conditions:
 - a. They are only accountable, individually or as part of a unit, to the executive management of the bank.
 - b. They are neither individually nor as part of a unit, involved in the financial transactions engineering process or the collateralisation process.
 - c. In all circumstances, they shall be operationally and hierarchically independent from the credit-decision process of the RE project.
 - ii. The appraiser shall be familiar with the specificities of the valuation of RE projects and have proven experience in this specific field of valuation.
 - iii. The appraiser shall be selected based on its specific market knowledge, including geographical specificities depending on the country of activity of the renewable energy project.

- iv. Only the appraiser shall be ultimately responsible to determine the FV and the ERV of the RE project.

2.2 Processes and procedures

4. Although the valuation of the cover pool assets is performed by the appraiser, who may be supported by a qualified third party (e.g. technical advisor), the CBB remains ultimately responsible for the proper valuation of the underlying projects. Consequently, the CBB must ensure the drafting of comprehensive and appropriate written procedures describing the processes and the policies to be applied in the context of the valuation of the assets in the cover pool. The aim of the written procedures shall be the definition and implementation of a proper valuation governance. Sufficiently senior, experienced and independent from “risk taking units” employees of the CBB shall be responsible for this governance framework.
5. Procedures shall not be solely based on a desk valuation. An inspection of the RE project to be valued must be part of the valuation procedure. The on-site inspection of the RE project can also be delegated to a qualified third party (e.g. technical adviser), who:
 - i. is independent from any project interests;
 - ii. has demonstrated sufficient technical skills and solid experience regarding RE projects to the bank;
 - iii. is accountable for the delivered results;
 - iv. provides the results of the inspection by way of transparently and precisely documented reports.
6. In its appraiser selection process, the CBB has to perform appropriate due diligences in order to derive a fair assessment of the capabilities and experience of the appraiser. The CBB shall undertake regular reviews of its assessment thereafter.

2.3 Frequency of revaluation

7. The frequency of revaluations of the RE projects in the cover pool shall be at least annually.
8. Additional revaluation rounds shall be triggered if current market, economic, political, legal, financial, environmental and/or any other project-related conditions have changed substantially in comparison to the valuation assumptions used for the last valuation.
9. In both cases FV shall be adjusted based on reasonable updated information at measurement date.
10. In principle, any adjustment of the FV requires a revaluation of the ERV. The ERV has to be adjusted if the FV falls below the ERV or the applied project specific risk-adjusted discount rates do not reflect the updated information.
11. If well-founded, the adjustment of the ERV can differ from the adjustment of the FV, such as in singular and non-recurring events having triggered the revaluation.

2.4 Consistent valuation techniques

12. The selection of the valuation technique shall be based on the nature, the facts and circumstances of the underlying RE project composed of one or more cash-flow generating production or technical units. The technical design, structure and development stage of the RE project shall be a key factor in the selection of the valuation technique. A discounted cash flow valuation technique shall only be retained when the RE project's future cash flows can be reliably forecasted. For mature projects with steady streams of revenues, the discounted cash flow approach can be completed by a comparative analysis using industry and transaction multiples, if available and comparable.
13. The FV and all other valuation indicators shall consider all future cash-flows from production or technical units by applying a consistent risk based valuation technique from measurement date to measurement date with reference to Article 12-5 (7) of the Law to generate a sustainable RE project specific CV.
14. A change in the valuation technique between two measurement dates shall be required when objective reasons exist that warrant such change. The underlying reasons of the change of valuation technique shall be documented, particularly with regard to the overarching principle that the selected valuation technique should always lead to the most informed estimate of FV and all other valuation indicators.
15. Discounted cash flow valuation techniques in isolation should be considered with diligence and caution. Due to the high levels of subjectivity embedded in income approach valuation techniques, a consistency cross-check with other valuation techniques (e.g. market approaches) corroborating FV estimates shall be systematically undertaken, if relevant comparable data is available with reasonable effort.

2.5 Valuation variables and data inputs

16. The collection choice of data shall be governed by the principles of objectivity, suitability and prudence. Consequently, the various assumptions used in the valuation models shall be based on data for which the applicability to the valuation model has been assessed by the appraiser. Likewise, the appraiser shall ensure the reliability of the various sources used to derive the data as well as the plausibility of the retained data.
17. The appraiser shall use reasonable assumptions and estimations to derive the expected cash flows in a discounted cash flow model. Consequently, the cash flows shall reflect the specific circumstances of the underlying RE project.
18. The plausibility of the forecasted cash flows must remain verifiable with a clear reference to the various underlying assumptions and economic drivers of the cash flows. These assumptions and economic drivers shall be outlined in the valuation model.
19. The main cash flow assumptions used in the valuation model shall be supported by concise documentation providing compelling evidence on the sustainability and the feasibility of the assumptions (e.g. technical due diligence reports, contracts and agreements e.g. for unit grid prices ("Einspeisevergütung"), development reports, etc.).
20. A peer review of the cash flow assumptions used in the valuation model shall be performed, if comparable RE projects are available (i.e. typically in a situation where the valuation is performed on specific units of a wider renewable energy park). Material deviations between assumptions retained and observed growth patterns of the industry shall be explained and the underlying reasons described in the valuation report.

21. For subsequent revaluation rounds, a backtesting of the FV and all other valuation indicators based on realised cash flows shall be performed in case material deviations between the forecasted and the realised cash flows have been observed. Such material deviations between the initial values and the backtested values shall be concisely explained and the cash flow forecasts of the subsequent revaluation shall be adjusted accordingly.
22. The forecasting horizon of the cash flows in the valuation model shall be aligned with the contractual conditions (e.g. timing of subsidies, lease terms) and the economic reality of the RE project. Consequently, it is expected that cash flow assumptions used in the valuation model change at the maturity of material contracts (e.g. unit grid prices). Likewise, the cash flows shall comprehensively reflect the capital expenditures (“CAPEX”) required to maintain the economic viability of the project. The appraiser shall assess whether replacement investments are sufficient in amount and that the timing of the replacement corresponds to the economic reality of the project. In general, the appraiser shall get comfort between the timing of revenues and expenses used in the cash flow forecasts and the economic and technical reality of the underlying RE project.
23. In case the application of a terminal value (i.e. typically the value that represents all future cash flows determined by a perpetuity growth rate) is not appropriate for the valuation of the renewable energy project, all cash flows over the lifetime horizon of the project should be visibly forecasted. Consequently, the application of a linear extrapolation of cash flows is deemed inappropriate as cash flows shall be expected to reflect contractual conditions and economic reality for every period over the forecasting horizon.

2.6 Discount rate and value adjustments for specific risk factors

24. The applied methodology to derive the discount rate shall be based on common market practices.
25. The appraiser shall use appropriate risk-adjusted discount rates adapted to the characteristics of the stream of cash flows. The various parameters used in the selected discount model shall be adapted to the underlying features of the RE project.
26. The discount rate derived by the retained methodology shall be adjusted for specific premiums covering risks such as production risks, country risks, inflation differentials, technology risk, market risks and all other type of risks applicable in the context of the underlying RE project in order to determine the FV and all other valuation indicators.
27. In general, the appraiser shall assess the requirement, if applicable, to apply discounts to the final FV and all other valuation indicators, to take into account individual specificities that could not be sufficiently reflected in the valuation variables (discount rate and cash flows). Where applicable, a specific discount for lack of liquidity and marketability shall be relevant in the context of RE projects’ valuation. The appraiser shall justify the omission of the application of any discounts pertaining to the specificities of the underlying RE project.
28. The non-applicability of any discounts shall be explicitly motivated and outlined in the valuation report.

2.7 Sanity checks of estimated FV

29. The FV estimate shall be subject to consistent sanity checks and shall, whenever possible, not be determined on the basis of a single valuation technique.

30. In case a discounted cash flow valuation technique has been retained, the appraiser shall apply a sensitivity analysis in order to test the variability of the FV estimate to modest changes in the assumptions. The sensitivity analysis shall foremost be applied to those assumptions that have been derived based on the highest levels of subjective judgements.
31. Irrespective of the final valuation technique used, the appraiser shall perform sanity cross-checks of the derived FV estimate by using at least a different valuation technique. Any material deviations between different valuation techniques shall be disclosed and the underlying reasons of the differences shall be comprehensively assessed and described.
32. As a further check, the appraiser shall also perform a comparison between the implied initial discount rate and the derived discount rate using a specific methodology (e.g. weighted average cost of capital (“WACC”) based on CAPM, build-up method, etc.). The difference between the discount rates shall provide an indication of the RE project’s specific risk premium/discount. The specific risk premium/discount shall be assessed, understood and described by the appraiser at each measurement date.

2.8 Treatment of loans in default

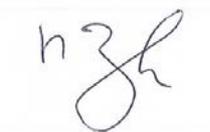
33. The treatment of default for loans that form part of the cover pool of renewable energy covered bonds shall be fully consistent with Article 178 of Regulation (EU) No 575/2013. In particular, the occurrence of default shall be based on the 90 days past due criterion as well as the unlikeliness to pay condition.
34. The materiality thresholds applicable to credit obligations past due shall be consistent with Article 2 of Commission Delegated Regulation (EU) 2018/171, set by the competent authority by way of regulation.
35. Consequently, for loans which form part of the cover pool of renewable energy covered bonds, the following shall apply in relation to the coverage requirements based on Article 12-5 (5) of the Law on the financial sector:
 - i. For loans with interest payments past due: The full interest amount of the loan shall be immediately excluded from the interest coverage calculation. For the calculation of the current value of the collateral, the full interest amount of the loan shall be excluded as well. If the interest amount which is in arrears is higher than 1% of either the nominal value or the current value of the individual loan, the complete loan shall be excluded from the calculation of the nominal value and the current value of the cover pool.
 - ii. For loans with redemption payments past due: The redemption amounts past due shall be immediately excluded from the calculation of the current value of the collateral. If the amount which is in arrears is higher than 1% of the current value of the individual loan, the complete loan will be excluded from the current value calculation of the cover pool.
 - iii. If the amount of redemption payments on an individual loan which is in arrears is higher than 1% of the notional amount, the complete loan will be excluded for the calculation of the nominal value of the collateral for the cover pool.
 - iv. If individual loans are not in arrears but fulfil the conditions of Article 178 of Regulation (EU) No 575/2013 for unlikeliness to pay, the aforementioned consequences i.e. exclusion from interest cover calculation, nominal cover calculation and current value calculation of the cover pool shall apply respectively.

2.9 Documentation

36. The result of the valuation including all parameters and underlying assumptions as well as the valuation methods used must be documented by way of a valuation report.
37. The valuation report must be exhaustive and sufficiently detailed in order to allow any authorised third party - e.g. the statutory auditor of the CBB, the “réviseur spécial” (auditor) or the CSSF – to review and to reconstruct the valuation easily.
38. All checks (e.g. sanity checks or peer reviews) and decisions (e.g. selection of appraiser, selection of valuation technique) stipulated in this circular must also be documented in writing and must be readily available in the CBB.

This circular shall enter into force with immediate effect.

COMMISSION de SURVEILLANCE du SECTEUR FINANCIER



Marco ZWICK
Director



Jean-Pierre FABER
Director



Françoise KAUTHEN
Director



Claude SIMON
Director



Claude MARX
Director general