Structured Finance and Covered Bonds Counterparty Rating Criteria: Derivative Addendum

Cross-Sector

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This criteria report should be read in conjunction with "Structured Finance and Covered Bonds Counterparty Rating Criteria," published July 2022.

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Related Criteria

Structured Finance and Covered Bonds Counterparty Rating Criteria (July 2022)

Covered Bonds Rating Criteria (June 2021)

Global Structured Finance Rating Criteria (October 2021)

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Scope

This Addendum describes Fitch Ratings' approach to analyzing derivative counterparty exposure in new and existing structured finance (SF) transactions and covered bond (CVB) programs. It should be read in conjunction with the "Structured Finance and Covered Bonds Counterparty Rating Criteria."

Each key rating driver is of equal importance.

Key Rating Drivers

Eligible Derivative Counterparty Definition: Fitch's analysis relies on counterparties being able to perform their obligations and meet the relevant minimum primary or secondary risk ratings specified in Figure 1 on the next page. The criteria are predicated on the assumption that continuation (hedging) derivative counterparties will be replaced upon downgrade below minimum risk ratings, and collateral is posted as an interim mitigant. For termination derivatives, the SF rating can be capped at the counterparty or the charged asset rating.

Collateralization Criteria: The availability of collateral is intended as a key mitigant if the counterparty defaults before being replaced (for continuation derivatives) or before the maturity of the transaction (for termination derivatives). Fitch's analysis relies on collateral posting arrangements to be documented at the time of transaction closing, even where the counterparty is eligible without posting collateral.

Determining the Collateral Amount: As the mark-to-market (MtM) valuation of the derivative can change over time and vary among counterparties, Fitch's criteria include volatility cushions and liquidity adjustments. For termination derivatives, Fitch will determine if the collateral posted is sufficient to fund the counterparties' principal and interest obligations upon termination of the swap.

Collateral Types, Advance Rates: In Fitch's analysis, collateral is limited to certain sovereign bonds, cash deposits with an eligible bank or other short-term qualified investments. To account for maturity mismatches, the credit given to sovereign bond collateral is subject to an advance rate. Where collateral is in a currency other than that of the swap counterparties' obligations, Fitch applies a further advance rate to address potential cross-currency moves.

Termination Payments: Fitch's analysis relies on termination payments due to an in-the-money SF issuer to reflect the role of the derivative; for example, to fund the replacement cost for a continuation derivative. Fitch also analyzes if the impact of termination payments payable to derivative counterparties is mitigated.

Definition of "Eligible Derivative Counterparty"

Fitch's analysis relies on all counterparties having the operational knowledge and ability to perform their contractually required functions. In addition to the functional qualification, to achieve isolation, Fitch's analysis is based on derivative counterparties meeting certain minimum risk ratings, as outlined below.

Figure 1

Derivative Risk Rating Table

Category of Highest Rated Note	Minimum Primary Risk Ratings (No Collateral)	Minimum Secondary Risk Ratings (with Collateral Posting)	
		Valid Flip Clause	No Valid Flip Clause
AAA	A or F1	BBB– or F3	BBB+ or F2
AA	A– or F1	BBB– or F3	BBB+ or F2
A	BBB or F2	BB+	BBB or F2
BBB	BBB– or F3	BB–	BBB– or F3
BB	Note Rating	B+	BB–
B	Note Rating	B–	B–

Note: In this report, Long-Term Rating means either Derivative Counterparty Rating (DCR; for derivative providers if assigned and applicable) or IDR (when DCR is not assigned or applicable) and Short-Term Rating means IDR. In case of third parties guaranteeing the obligations of a derivative counterparty in jurisdictions where the flip clause is enforceable, Fitch considers the highest of the guarantor's IDR and the applicable counterparty's rating. For example, 'AAAsf' bonds can be supported by a 'BBB–' entity guaranteeing a collateralized derivative provider, or post collateral itself. IDR – Issuer Default Rating.
Source: Fitch Ratings.

The minimum primary risk ratings shown in Figure 1 apply to continuation derivative counterparties, considering the respective rating of the highest rated note. For example, SF ratings of 'AAA' can be supported by counterparties with a minimum Long-Term Derivative Counterparty Rating (DCR) — or Issuer Default Rating (IDR) if not assigned — of 'A' or a minimum Short-Term IDR of 'F1' without posting collateral.

The minimum secondary risk ratings shown in the column "Valid Flip Clause" apply to derivative counterparties that post adequate collateral and where sufficient legal comfort regarding the enforceability of "flip clauses" is available. For example, note ratings of 'AAA' can be supported by counterparties with a minimum Long-Term DCR — or IDR — of 'BBB–', or a minimum Short-Term IDR of 'F3' if it posts collateral. In effect, the posting of collateral extends the ability of a counterparty to act as derivative counterparty by mitigating the exposure.

The minimum secondary risk ratings shown in the column "No Valid Flip Clause" apply to derivative counterparties that post adequate collateral, but where no sufficient legal comfort with respect to the enforceability of flip clauses is available.

The rating of the SF bonds for termination derivatives can be capped at the rating of the counterparty, for uncollateralized exposures, or the rating of the collateral, for collateralized exposures. See *Charged Assets* in Fitch's "Structured Finance and Covered Bonds Counterparty Rating Criteria" report for more details.

For the purpose of this criteria report, branches of a rated bank will be considered as an eligible counterparty so long as the applicable rating (DCR or IDR) of the bank of which it is a part, but subject to a cap at the Country Ceiling of the host country of the branch is sufficiently high to allow for eligibility, per this criteria report. Please see the report "Country Ceilings Criteria" for more details. For derivative counterparties, if the derivative is entered into under the International Swaps and Derivatives Association (ISDA) master agreement and section 10 (a) of the schedule applies, the Country Ceiling is not applicable.

The DCR assigned to an institution is not automatically considered for branches operating outside the rated bank's country of incorporation. This will be analyzed on a case-by-case basis.

SF Modifier

All ratings referenced in this criteria report are deemed to have the SF modifier attached, except for transaction types that are not considered by Fitch to be SF.

Collateralization Criteria

Fitch's collateralization criteria focus on replacement costs for continuation-type derivatives. Fitch assesses the calculation of any early termination payment to determine the extent to which it is aligned to the replacement costs (see *Determination of the Termination Payment Amounts* below for more detail). The collateralization criteria also provide an additional buffer, consisting of the volatility cushion (VC) and the liquidity adjustment (LA), which is intended to cover additional costs.

The focus of the collateralization criteria for termination derivatives is the avoidance of allocated losses, rather than the loss of future interest due to an earlier repayment caused by early termination. In particular, any principal and interest payments due up to the time of contract termination should be covered.

Fitch's analysis relies on collateral for all derivatives being posted in line with the following principles:

- The collateral is for the benefit of the SF transaction or CVB programs, with a counterparty that holds minimum primary risk ratings as per Figure 1; or with an independent custodian under a legal arrangement, where the securities are legally isolated from the custodian.
- The market value of the derivative and the amount of any collateral to be posted are determined at least weekly. Fitch's analysis relies on collateral being posted shortly after the valuation day, in line with the market standard settlement periods for the collateral.
- The credit support annex (CSA) or similar documentation is executed at the point of entering into the derivative agreement
- The CSA provides clarity on the collateral enforcement rights when the counterparty is the defaulting or sole affected party. When collateral arrangements do not follow standardized, industrywide frameworks — for example, those produced by the ISDA — a legal opinion should address the enforceability of the collateral arrangements. Similarly, jurisdiction-specific aspects can require legal analysis to establish the enforceability of collateral provisions.
- Any costs associated with collateral posting and with the appointment of a replacement counterparty or guarantor are borne by the counterparty that becomes ineligible.
- A SF transaction's trustee reports include information on the type and amounts of collateral posted, if any. Based on the provisions of standard CSAs, the collateral amount should be calculated by the valuation agent in a commercially reasonable manner and acting in good faith. Fitch's analysis relies on the valuation agent to have sufficient operational capacity and market knowledge to perform swap valuation calculations. Fitch may perform a "sense check" of reported collateral posting amounts as part of its surveillance process.
- Certain advance rates can apply, depending on the type of collateral.
- Where transaction documents define a threshold amount below which weekly collateral posting adjustments will not be made — for example, a minimum transfer amount (MTA) — this threshold should not be more than USD100,000 or its stipulated currency equivalent, per transaction. Where MTAs are above this limit, this risk will be assessed in Fitch's rating analysis, depending on its significance for the SF transaction.
- Collateral posting is "unilateral" only. Collateral is not posted for the benefit of the counterparty when it is "in the money."

For the purpose of monitoring the posted collateral, investor reports should include details on the collateral amount.

Determining the Collateral Amount

Continuation Derivatives

If a counterparty elects to post collateral and fulfils at least the applicable minimum secondary risk ratings set out in Figure 1, Fitch evaluates the amount of the collateral in accordance with the formulae set out in the table below. Upon downgrade below the applicable minimum secondary risk ratings, Fitch expects adequate collateral to be posted within 14 calendar days from counterparty ineligibility, even when the ineligible entity will ultimately be replaced, or it obtains a guarantee, within 60 days. Where the counterparty is rated below the applicable minimum secondary risk ratings specified in Figure 1 at transaction close, Fitch does not view collateral as a viable mitigant to the credit exposure toward the derivative counterparty.

Figure 2

Collateral Posting Formulas for Minimum Long-Term Rating or Short-Term IDR

Rating Category of Highest Rated Note	Formula 1	Formula 2
AAA	A– or F2	BBB– or F3
AA	BBB+ or F2	BBB– or F3
A	BBB– or F3	BB+
BBB	N.A.	BB–
BB	N.A.	B+
B	N.A.	B–

N.A. – Not available. IDR – Issuer Default Rating.
Source: Fitch Ratings.

For example, a counterparty with a Long-Term IDR, or DCR when assigned, of 'A–' or a Short-Term IDR of 'F2' supporting a note rating of 'AAA' would be considered eligible as long as the posted collateral amount was consistent with Formula 1 per Figure 2. Alternatively, a counterparty with a Long-Term IDR, or DCR when assigned, of 'BBB–' or a Short-Term IDR of 'F3' supporting a note rating of 'AAA' would be considered eligible as long as the posted collateral amount was consistent with Formula 2. To avoid doubt, when a counterparty is rated below 'BBB–' and 'F3', and column "No Valid Flip Clause" applies, only replacement or suitable guarantees are considered sufficient to protect a 'AAA' or 'AA' rated note from counterparty risk.

The two collateral-posting formulae are as follows:

1. Collateral Amount = Max[0; MtM + (LA * VC * 60%* Notional)]
2. Collateral Amount = Max[0; MtM + (LA * VC * Notional)]

Figure 3

Definitions of Collateral Amounts Terms

MtM	The mark-to-market (MtM) value of the derivative at the time of valuation for the purpose of collateral posting. Fitch's analysis relies on the MtM to be calculated by the valuation agent based on an estimate of the amount that would be payable in the event of a termination of the derivative agreement on the valuation date, taking into account the prevailing market environment. See *Determination of the Termination Payment Amounts* below for more details.
LA	The liquidity adjustment is specified separately for each type of derivative based on the perceived degree of liquidity of the derivative in question. See *Liquidity Adjustment* below for a classification of derivatives and the corresponding LAs for such derivatives.
VC	The volatility cushion amount addresses the risk that the market value of the derivative may change before replacement. See *Volatility Cushions* below for a table specifying VCs by derivative characteristics.
Notional	The current notional amount on which derivative payments are based. Fitch would expect to use the highest notional where the notional differs for each of the legs of the derivative.

Source: Fitch Ratings.

In Fitch's view, the combination of LA and VC provide sufficient protection against both the potential MtM change over the exposure period and potential pricing differences between the original and the replacement counterparty. The 60% weighting in Formula 1 in Figure 2 is intended to reflect the lower risk of counterparty default from a higher rating. The percentage is subjective and does not directly reflect historical empirical observations regarding the relative jump-to-default probabilities of different rated counterparties.

The appointment of an eligible counterparty as guarantor or replacement counterparty would be a valid alternative to posting the collateral amount (CA), but Fitch would expect collateral to be posted and remain available until these have occurred.

Derivative market values in these formulae in favor of the counterparty are defined as negative market values. As a result of the formula, collateral should be posted even if the derivative market value is in favor of the counterparty. Fitch does not expect collateral to be posted only where the derivative's market value is significantly in favor of the counterparty and exceeds the LA and VC.

The formulae assume that the collateral is posted in cash. The collateral is assumed to be posted in the currency of the derivative for single-currency derivatives. For cross-currency derivatives, the collateral is assumed to be posted in the currency that the special-purpose vehicle (SPV) receives from the derivative, which is usually the same currency as that in which the notes issued by the SPV are denominated. Where the collateral is not posted in cash or where currency risk arises as part of the collateralization, Fitch applies advance rates to the collateral value depending on the types of collateral used (see *Collateral Types and Advance Rates* below for more detail). See *Appendix 4* for examples of the collateral amount calculation.

Liquidity Adjustment

Market feedback confirmed that the effort and costs involved in replacing a derivative are strongly influenced by the type of derivative in question, meaning the complexity of the derivative, the degree of optionality and conditionality and how easy it is for a replacement counterparty to hedge its obligations under the derivative. Fitch therefore applies liquidity adjustments for derivatives where liquidity and replacement would be expected to be more challenging.

Basic liquidity adjustments are specified in the *Basic Liquidity Adjustment* table below and depend on whether the derivative is balance-guaranteed or references a fixed, increasing or decreasing schedule. Balance-guaranteed derivatives incorporate factors beyond the counterparty's control, such as delinquencies and prepayments, and are therefore harder to analyze, and typically more expensive.

Hybrid arrangements that cap or floor the notional according to certain thresholds, and thereby often create a corridor of notional levels, are treated as balance-guaranteed, unless they provide for a very limited variation of the notional. Also, swaps with nonstandard elements, such as rates loosely linked to market rates, but containing an element of optionality or discretion by the rate-setting entity, described in this report as "nonstandard indices," are treated in the same way as balance-guaranteed swaps.

When pricing derivatives, market participants also focus on the degree of counterparty or credit risk embedded in them. However, Fitch does not consider this a key element in determining the price for most derivatives in SF transactions and CVB programs, as derivative payments rank at the top of the priorities of payment, limiting credit risk to the transaction. The LA can be increased on a case-by-case basis for those derivatives attached to nonsenior rated notes, or those that do not have a senior position in the priority of payments.

Figure 4
Basic Liquidity Adjustment

Type		Basic Liquidity Adjustment (%)
1.	Derivatives with a fixed notional/scheduled notional and referencing standard indices.	0
2.	Derivatives with payment obligations that reference standard indices and a notional referencing the balance of a rated note with a "hard bullet" maturity. In this context a "hard bullet" maturity only includes notes where the underlying rating addresses repayment on a given maturity date. The definition of "hard bullet" does not include notes that are rated on the basis of pass-through amortization following a trigger event.	0
3.	"Esoteric" derivatives, generally those with a notional depending on asset performance, including delinquencies or prepayments. "Balance guaranteed" and/or derivatives referencing "nonstandard indices"; in this context, nonstandard indices include those indices determined according to a basket of bank-specific lending rates or indices that are influenced by a third-party's actions; for example, social housing lending rates. This is not an exhaustive list, and other derivatives can be classified as esoteric.	25

Source: Fitch Ratings.

In addition, very long-dated derivatives can be difficult to replace, as a replacement counterparty may have problems hedging itself to maturity over such long periods. Long-dated treasuries up to 20 years exist for the most commonly traded currencies (U.S. dollars, UK pounds, euros, Japanese yen and Swiss francs) and are actively traded. Fitch assumes that liquidity reduces as maturities extend into the future.

The liquidity adjustment is therefore increased by 5% for each year the swap weighted average life exceeds 20 years, similar to below:

LA = (1 + BLA) * (1 + Max(0%; 5% * (WAL – 20)

Figure 5
Definitions of Liquidity Adjustment Terms

BLA	Basic liquidity adjustment derived from the type of the derivative.
WAL	The weighted average life of the derivative in years, rounded up to the next integer, determined in the manner described under *Volatility Cushions*.

Source: Fitch Ratings.

Volatility Cushions

The VCs calculated by Fitch address the risk of the potential change in the market value of the derivative over the replacement period. Fitch's approach to calculating the VCs and advance rates (ARs) assumes that the derivative exposure addressed by them is not a key risk driver of the transaction performance, which is the case in the large majority of transactions. *Appendix 3* provides a brief description of the methodology used to calculate the VCs.

Figure 6
Volatility Cushions (VCs) for Interest Rate Swaps, Caps, Floors and Collars

Note Rating		Fixed/Floating Interest Rate Swaps, Caps, Floors and Collars, Depending on the WAL (Years, %)						
Category	**Basis Swaps (%)**	**<1**	**1–3**	**3–5**	**5–7**	**7–10**	**10–20**	**20–50**
AA or Higher	0.75	0.75	2.25	3.50	4.50	5.50	7.50	9.50
A or Below	0.50	0.50	1.50	2.50	3.00	3.50	4.50	5.50

Note: The VCs for caps and floors are reduced by 30%; for example, for an interest rate cap with a WAL of up to one year, the rate would be 0.75% * 70% = 0.525%. WAL – Weighted average life.
Source: Fitch Ratings.

Figure 7

Volatility Cushions (VCs) for Cross-Currency Swaps

	Fixed/Floating, Fixed-Fixed or Floating-Floating FX Swaps at WAL (Years, %)						
Note Rating Category	**<1**	**1–3**	**3-5**	**5–7**	**7-10**	**10–20**	**20–50**
AAsf or Higher							
— Floating/Floating	11.75	11.75	11.75	11.75	11.75	11.75	11.75
— Fixed/Floating	11.75	12.50	13.00	13.50	14.00	15.00	16.00
— Fixed/Fixed	12.00	13.50	14.75	15.75	16.75	18.75	20.75
Asf or Below							
— Floating/Floating	7.75	7.75	7.75	7.75	7.75	7.75	7.75
— Fixed/Floating	7.75	8.25	8.75	9.00	9.25	9.75	10.25
— Fixed/Fixed	8.00	9.00	10.00	10.50	11.00	12.00	13.00

Note: The VCs for FX options are reduced by 30%, e.g. for an FX option with a WAL of up to one year the rate would be 11.75% * 70% = 8.2%. WAL – Weighted average life. FX – Foreign exchange.
Source: Fitch Ratings

Basis swap (floating/floating) refers only to specific basis swaps in which both legs reference standard indices over the same currency and a horizon of up to 12 months; for example, a swap covering three-month U.S. dollar Libor with a mismatch in the reset date by 10 days, or a swap covering three-month U.S. dollar Libor to 12-month U.S. dollar Libor mismatch, or a swap covering Bank of England base rate versus three-month UK pound Libor. Standard variable rates (SVRs) are not considered standard indices as they are lender-specific. As such, basis swaps exchanging SVRs with sterling Libor are regarded as very difficult to replace, and the resulting basis risk is subject to ad hoc adjustments as detailed in the relevant sector criteria report.

The weighted average life (WAL) refers to the timing of the amortization assuming non-exercise of any early termination clauses, zero defaults and a capped prepayment assumption. Fitch's analysis relies on the prepayment assumption being capped at the lowest of the following: 5% per year; the portfolio-specific prepayment rate reported over the previous six months; and the counterparty's internal prepayment rate assumption. Alternatively, a zero prepayment assumption can be applied for simplicity.

The above VCs assume standard swap structures. There have been derivative agreements in SF transactions and CVB programs where the payment obligations of one or both parties are defined with esoteric references — for example, the scheduled yield of the securitized asset pool — rather than specific fixed rates or standard floating-rate indices, such as Libor.

In such cases Fitch evaluates the documented VC in comparison to the levels shown in the above tables, taking into account the underlying economic risks within the swap structure. For example, Fitch would expect a combination of the above VCs to be applied where the economic risk is considered one of a fixed/floating exposure on 50% of the asset pool and basis rate on the remaining 50% of the pool. Fitch considers the broader replacement prospects of such esoteric swaps in addition to the adequacy of the VC as part of the overall rating analysis.

Where applicable, the tables above refer to VCs for pairs of the following currencies only: Australian dollar, Canadian dollar, Swiss franc, Czech koruna, Danish krone, euro, UK pound, Korean won, Norwegian krone, New Zealand dollar, Japanese yen, Swedish krona, Singapore dollar and U.S. dollar. No differentiation is made between currencies because, from a forward-looking perspective, changes in the yield curve are broadly assumed to be equally likely and of similar potential magnitude among the various currencies. Fitch will assess other currencies on a case-by-case basis.

The VCs are calculated proportionally for derivative instruments, which change their nature during the course of their life. One example is fixed/floating swaps, which change to a floating/floating swap after an initial fixed-rate period. Fitch's determinations of the VCs for interest rate caps and floors and FX options are driven by the same factors as a standard fixed/floating interest rate swap. However, the effects of changes in the risk drivers on the value

of such usually out-of-the-money instruments tends to be smaller. For this reason the VC for caps, floors and FX options is reduced by 30%.

Netting of Collateral Amounts

Where more than one derivative exists between the same SF issuer and counterparty, for example, using a single ISDA master agreement with multiple confirmation documents, Fitch reviews the documented netting arrangements for termination payments and collateral posting. Where payments under the different swaps are paid at the same position in the SF issuer's priority of payments and the swaps are concluded under the same ISDA master agreement, the documentation can provide for the netting of termination payments. Fitch's analysis relies on the applicable collateral posting formula (see Figure 2) being applied after summing the MtM, VC and LA of each individual swap, to the extent that termination payments are likely to be netted.

The table below demonstrates a netting example. The MtM of swap 1 is assumed to be significantly negative. At the time of the MtM valuation the issuer has a net obligation towards the counterparty to be paid via future swap payments. If the collateral amount is calculated on an individual basis for each swap, assuming Formula 2 from Figure 2, the resulting aggregate collateral amount is 1,375,000, or 0 + 1,375,000. However, if the aggregate collateral amount is calculated on a netted basis, the aggregate collateral amount equals zero, as the negative MtM on swap 1 is sufficient to mitigate the other amounts due to the SF issuer. The LA and VC component is always represented as a positive number, and therefore no netting between these components is possible.

Figure 8

Netting Example

	Swap 1	Swap 2	Netted
MtM ($)	(15,000,000)	1,000,000	(14,000,000)
Notional ($)	40,000,000	40,000,000	—
Liquidity Adjustment (LA)	1.25	1.25	—
Volatility Cushion (VC; %)	11.75	0.75	—
LA * VC * Notional ($)	5,875,000	375,000	6,250,000
Max (0; MtM + [LA * VC * Notional]) ($)	0	1,375,000	0

MtM – Mark-to-market.
Source: Fitch Ratings.

Posting collateral on the basis of a netted position assumes that it will be possible to replace both swaps on a timely basis. In the above example, the proceeds of swap 1 would be required in order to fund the replacement of swap 2. Posting collateral on a netted basis can offer insufficient protection to the SF transaction or CVB program, where there are replacement concerns regarding specific swaps; for example, due to their esoteric nature. Fitch considers the structure to provide insufficient collateral to mitigate the counterparty risk in such cases, and analyses the transaction on the basis that the derivative counterparty exposure is not consistent with its criteria.

Termination Type Derivatives

Fitch's analysis relies on the collateral amount being sufficient to cover any principal and interest payments due to the noteholders up to the point of the SF transaction's early termination following a counterparty's default. Amounts related to the principal are usually addressed by the nature of the structure through a "charged asset" (see *Charged Assets* in "Structured Finance and Covered Bonds Counterparty Rating Criteria"). Fitch assumes that two coupon periods, which are subject to a minimum of six months, will in most cases be sufficient to cover interest that accrues and remains unpaid upon the transaction's early termination following a counterparty's default.

Collateral Types and Advance Rates

Collateral can often be posted in various currencies referenced in the CSA. Fitch's criteria assume that the collateral is of such credit quality that it would introduce only limited additional credit risk. Fitch's analysis relies on collateral being in one of the following categories:

- **Highly rated sovereign bonds:** Fitch believes sovereign bonds rated at least 'A' and 'F1' can provide a suitable source of collateral, subject to the application of appropriate advance rates intended to mitigate market value risks. The application of advance rates allows the use of collateral with longer-term maturities than included in the qualified investments category. *Appendix 1* gives advance rates for certain sovereign bonds.
- **Qualified investments:** Such collateral can take the form of investments in securities or certain money market funds of bank accounts, as detailed in "Structured Finance and Covered Bonds Counterparty Rating Criteria."

Advance Rates

Advance rates cover the market value risk of any collateral, with the exception of overnight exposures to maturity or FX risk. The notional of the CA to be posted can be higher than the notional of the CA that might be needed if no advance rates are applied, depending on the advance rate, leading to overcollateralization. Fitch defines the actual CA posted for a derivative ($CA_{derivative}$) to be as follows.

$CA_{derivative}/AR_{collateral}$

The collateral advance rate ($AR_{collateral}$) addresses the risk of a change in market value of the collateral security over the time it takes to find a substitute counterparty on significant deterioration in creditworthiness, or default, of the counterparty posting the collateral. Fitch's advance rates have been calculated to cover a 45 business day period. Fitch's analysis relies on the market value of the derivative and the collateral being determined at least weekly. Accordingly, any additional collateral should be posted at least weekly, or returned when the value of the posted amount exceeds the calculated CA.

Fitch assumes the collateral to be held in an account either in the name of, or pledged to, the SPV and legally isolated from the derivative counterparty. Fitch further assumes that the enforceability ranking and perfection of the security interests created, or enforceability of any title transfer arrangement, is given when a counterparty collateralizes its position.

The collateral for cross-currency derivatives is assumed to be posted in the currency that the SPV receives from the derivative, which is usually the same currency as the notes issued by the SPV. Where the collateral is denominated in a different currency, Fitch's analysis relies on both the specific currency advance rate and the specific collateral advance rate being applied by multiplying both advance rates.

Appendix 2 provides a brief description of the methodology used to calculate the advance rates.

Rating Impact of Early Termination Payments

Most termination payments, as with other payments due to a derivative counterparty, rank senior in a SF transaction's priorities of payment/payment waterfall. As a consequence, scenarios where such termination payments can arise and burden the SF transaction need to be considered as part of the rating analysis. Fitch will reflect potential termination payments in its rating analysis as follows.

- Some termination payments are triggered by events outside the scope of Fitch's rating. This includes, for example, those arising from an illegality or force majeure. Investors should be aware that any risk resulting from this type of termination payment is not reflected in Fitch's rating.
- Termination payments relating to the nonperformance by the SF issuer can be triggered by events within the scope of Fitch's rating, and the likelihood of their occurrence can be assessed in the rating analysis and the relevant rating scenarios. For example, one part of Fitch's cash flow analysis is an assessment of whether, during the life of the transaction, sufficient funds are available within the rating stress scenarios to fulfil the

SPV's payment obligations under the derivative. Such payments, where due to the derivative counterparty, can rank senior to payments due to noteholders.

- Termination payments relating to nonperformance by the counterparty can also be triggered by events within the scope of the rating analysis, and the likelihood of their occurrence would, if not mitigated, affect the rating analysis. Typically, the transaction documents require subordination of these termination payments due to the counterparty in the transaction's priorities of payment, which is known as a "flip clause".
- For counterparties affected by the absence of, or potential invalidity of flip clauses with respect to termination payments, Fitch's analysis relies on a replacement within 60 calendar days of any downgrade below the applicable minimum secondary risk rating, indicated as "No Valid Flip Clause," for the respective note rating shown in Figure 1. Therefore, collateralization ends as a remedy earlier than for counterparties not affected by this issue. This provision is intended to mitigate the potentially enhanced risk to affected transactions in the event of insolvency of the relevant counterparty.
- Termination payments arising upon occurrence of a benchmark event in relation to the derivative transaction index may be material to Fitch's rating analysis. This risk is considered to be sufficiently remote in cases where the derivative agreement includes fallback provisions similar to the ISDA Benchmark Supplement. When provisions to find a replacement index are significantly different or they provide the derivative counterparty with the possibility to terminate the transaction if the derivative counterparty does not agree to the replacement rate, Fitch will apply a case-by-case approach to assess the materiality to the notes' rating. Fitch will disclose the approach applied in the respective rating action commentaries, including their effect on the rating where appropriate.

Where Fitch believes the risk of termination payments of uncertain size falling due in priority to, or pari passu with, payments to noteholders is not sufficiently mitigated, the ratings of the notes can be constrained by the rating of the counterparty, or Fitch may not be able to assign investment-grade ratings, or any ratings at all.

Derivative Documentation

Derivatives in SF transaction and CVB programs are usually documented under a master agreement published by the ISDA. The master agreement addresses matters such as representations and undertakings by the parties, events of default and other termination events, and payment methods and payment measures arising upon early termination.

Nearly all securitizations using swaps, caps, floors and options use either the Multicurrency-Cross Border version of the 1992 ISDA master agreement or the 2002 ISDA master agreement, rather than the Local-Currency Single Jurisdiction version of the 1992 ISDA master agreement, regardless of the number of currencies or jurisdictions considered. The ISDA master agreement is typically governed by either New York or English law.

The 2002 ISDA master agreement is similar in form and substance to the 1992 version, with many of the substantive differences between the agreements relating to termination. Although the events that can bring about termination have not changed materially, the time in which termination can be effected subsequent to certain events occurring has been shortened, and the payment measure for calculating payments upon termination is different. Fitch will assess whether the derivative contracts follow certain principles, outlined throughout this report, to understand the impact on the rated notes, regardless of whether the 1992 or 2002 ISDA master agreements are used.

However, in some instances Fitch has seen master agreements drafted in a local language and governed under local law. Although such local master agreements can simply be a translation of an ISDA master agreement, Fitch nevertheless reviews the relevant derivative documentation, which may require legal analysis, to identify any risks in relation to the application of local law to such an agreement in the context of Fitch's rating analysis.

The master agreement is accompanied by a schedule and a confirmation, which supplement and override, to the extent of any inconsistency, the master agreement. If there is an inconsistency

between the schedule and the confirmation, the confirmation takes precedence. The confirmation details matters, including the actual rates and indices governing the relevant derivative, the dates when payments are due and the notional amount for calculating the payments. The schedule will apply, supplement or amend certain provisions in the master agreement and will often introduce additional termination events (ATEs).

In addition, the terms of collateralization as a mitigant to counterparty exposure are typically set out in a CSA, in a form published by ISDA for both English and New York law. Experience with previous downgrades of market participants suggests that agreeing and putting in place a CSA is a time-consuming exercise. To avoid the possibility that a credit risk could remain uncovered due to failure to put the CSA in place in time, Fitch's analysis relies on the CSAs to be agreed and signed by the initial transaction counterparties when entering into the derivative agreement. Fitch will review transactions' CSAs to assess a possible rating impact for the transaction.

The CSA also addresses matters such as the duties of the various counterparties to the CSA; the frequency of the MtM of collateral and derivative valuation; and the posting of collateral, the types of eligible collateral and the minimum transfer amount in relation to a delivery or return of collateral.

Events of Default and Termination Events

The ISDA master agreement defines events of default (EoDs) and termination events that can bring about the early termination of a derivative. An EoD gives the nondefaulting party the right to terminate all derivative transactions under the master agreement and, where elected, may provide for automatic termination following a bankruptcy EoD. A termination event gives either one or both parties the right to terminate one or more, but not necessarily all, derivatives between them under the master agreement. Fitch views events of default and termination events in a similar manner, as each can bring about a termination of the derivative contract, and therefore each event needs to be considered in the rating analysis.

The events of default set out in the ISDA master agreement can be summarized as follows.

- Failure to pay or deliver: A party fails to make any payment or delivery due, with a grace period of three business days (ISDA 1992) or one business day (ISDA 2002) after notification.
- Breach of agreement: A party fails to comply with any other obligation in accordance with the agreement, and this is not remedied within 30 days after notification.
- Credit support default: The party relies on a credit support provider and/or credit support document, and there is a default with regarding this provider and/or document.
- Misrepresentation in a material respect.
- Default under a specified transaction.
- Cross-default, which is default on certain other debt over an agreed threshold amount.
- Bankruptcy or similar insolvency events.
- Merger without assumption: One party merges, and the merged entity does not assume certain obligations.

The termination events set out in the ISDA master agreement can be summarized as follows.

- Illegality: A change in the law makes it illegal for a counterparty to abide by the terms of the derivative agreement.
- Force majeure event (ISDA 2002 only): A party cannot comply due to an event of force majeure or act of state (commonly cited examples include a natural disaster, an act of terrorism or an act of war) and cannot cure the noncompliance within a specified period.
- Tax event: A change in tax law makes, or will make, a party withhold or deduct tax.
- Tax event upon merger: A party will have to withhold or deduct tax due to the merger of a party.

- A credit event upon merger: A party merges, and the merged entity is substantially weaker than before.

The party directly affected by or having caused the termination event is termed the affected party. It is possible that both parties could be affected by the same event. A tax event upon merger adds the concept of a burdened party, as described below. The party that has the right to terminate the derivative agreement differs depending on the type of termination event.

The affected party in the case of the termination events previously described, and the burdened party in the case of tax event upon merger, can be described as follows.

- Illegality: The affected party is the party that is prohibited from making or receiving its payment or complying with some other material provision under the derivative because it is illegal.
- Force majeure event: The affected party is the party that is prohibited from making or receiving its payment or complying with some other material provision under the derivative due to the force majeure event.
- Tax event: The affected party is either the party that must make a tax payment on its leg because a tax authority or court has levied a tax on the payment, or the party that receives a lower payment on its leg because the tax authority or court has levied a tax on the receipt of payment.
- Tax event upon merger: The burdened party is either the party that must make a tax payment on its leg due to a tax levied as the result of a merger, or the party that receives a lower payment on its leg because of a tax levied on the receipt of payment as the result of a merger. The affected party is the entity that has merged.
- Credit event upon merger: The affected party is the party that is left substantially weaker by virtue of the merger.

The party allowed to terminate the derivative upon the occurrence of each of the termination events is as follows:

- Illegality — either party.
- Force majeure event — either party.
- Tax event — the affected party.
- Tax event upon merger — the burdened party.
- Credit event upon merger — the party that is not the affected party.

The terms of the master agreement are often amended by the schedule, which may introduce or disapply certain EoDs or termination events relevant to the transaction in question. Examples of ATEs include the following:

- **Acceleration/enforcement notice:** This can occur if the trustee serves a notice to the SF issuer upon an EoD under the notes, accelerating payment so that the notes become immediately due and payable. Ideally the SF issuer is also allowed to terminate the derivative if acceleration occurs. This mitigates the risk, if the counterparty is the only party able to terminate, that it may choose not to do so or may be unable to do so.
- **Redemption of notes by the issuer:** For the same reason as set out above in "Acceleration/enforcement notice," ideally both parties should have the right to terminate the derivative upon redemption of the notes.
- **Credit deterioration:** This can occur if the counterparty or a credit support provider of the counterparty becomes an ineligible counterparty as a result of the deterioration of its creditworthiness. For example, this might occur upon a decrease in creditworthiness below a predefined level where the action specified to be taken upon becoming ineligible is not taken within a predefined period. In such circumstances, the counterparty would be the affected party, with the right to terminate being at the option of the issuer as the non-affected party.

The sections below describe what Fitch typically observes in derivative documentation regarding EoDs and termination events. If the documentation for a specific transaction deviates materially from this description, Fitch will assess the potential rating impact case by case.

Events of Default

Breach of Agreement

Bankruptcy-remote SPVs can perform various roles in SF transactions and CVB programs, from being issuers of the notes to intermediate roles such as borrowers of the SF issuer. The SPV is usually bound by the covenants in the transaction documents. In SF transactions and CVB programs the rights of the counterparty to take action following a breach by the SPV are usually limited by the SF transaction documents.

All the secured creditors, including the counterparty, generally agree only to take collective action to terminate agreements, accelerate the SPV's obligations in a default, and enforce security through the trustee or other appointed representative. Therefore, this EoD is typically not applied to the SPV. However, any breach by the SPV under the transaction documents may trigger a default under the notes if the parties have provided for it, leading to acceleration or enforcement, which can be included as an ATE for the derivative in question in the schedule to the master agreement.

It is typical for this EoD to apply to derivatives executed in the counterparty's ordinary course of business. For this reason, Fitch's analysis relies on Breach of Agreement EoD to apply to the derivative counterparty, as it would in its ordinary derivative transactions.

Credit Support Default

Fitch does not expect this EoD to apply to the SPV, as it typically has no credit support documents or credit support providers. This EoD may apply for the counterparty. Where the counterparty's obligations are guaranteed, Fitch's analysis relies on the guarantee to include a credit support document from the counterparty and the guarantor to be a credit support provider of the counterparty. A default under the guarantee will therefore be an EoD under the derivative, and certain other EoDs, such as bankruptcy, will apply to the guarantor.

Misrepresentation

For the reason outlined in *Breach of Agreement* above, Fitch's analysis relies on the rights of the counterparty under the derivative agreement to declare a misrepresentation EoD by the SPV to not greater than the rights of the other transaction-secured creditors.

This is typically achieved by not applying this EoD to the SPV. If the parties have provided for it, any misrepresentation by the SPV under other transaction documents may trigger a default under the notes leading to acceleration or enforcement, which can be included as an ATE.

It is typical for this EoD to apply to the counterparty in derivatives executed in its ordinary course of business, again for the reasons outlined in *Breach of Agreement* above. Fitch's analysis therefore relies on this EoD applying to the derivative counterparty, as it would in its ordinary derivative transactions.

Bankruptcy

Fitch does not expect this EoD to apply to the SPV. The counterparty's right to take action to terminate the derivative upon the SPV's bankruptcy is subject to the terms of the transaction documents. In any event, Fitch's analysis relies on the SPV being bankruptcy-remote.

Fitch relies on this EoD applying to the counterparty, as not only will bankruptcy indicate that the counterparty does not have the financial means to meet its payment obligations under the derivative, but the transaction creditors should be able, in the event of the counterparty's bankruptcy, to instruct the trustee to terminate the derivative and to replace the counterparty.

Default under Specified Transactions

This EoD typically does not apply to either the SPV or the counterparty. One reason for disapplying this event with respect to both parties is that a SF transaction or CVB program will not typically have any link to other transactions.

Cross-Default

Fitch does not expect this EoD to apply to the SPV where it is established as a bankruptcy-remote entity solely for the purpose of executing the transaction. This is because the transaction parties would typically wish to avoid any link between the transaction and other unrelated transactions. There will also usually be restrictions on the SPV incurring obligations that might otherwise fall within the ambit of the cross-default provision.

This EoD may apply to the counterparty, as it provides a separate and additional right to terminate that may occur before other credit-linked events, such as bankruptcy or credit deterioration. Fitch will review case by case the level of the threshold amount for the cross-default and the scope of the obligations included within the cross-default — the specified indebtedness.

Termination Events

Tax Event

This termination event typically applies to the SPV as an affected party, allowing it to terminate the derivative if payments made by the counterparty become subject to a withholding tax following a change of law and the counterparty is not obliged to gross up those payments.

This termination event typically also applies to the counterparty as an affected party, allowing the counterparty to terminate the derivative either if payments made by the SPV become subject to a withholding tax following a change of law (in which case the SPV would not normally be obliged to gross up those payments), or if payments made by the counterparty become subject to a withholding tax following a change of law and the counterparty is obliged to gross up those payments.

A change in tax law is not within the scope of Fitch's rating. However, where no legal comfort is provided on the absence of withholding tax on payments made by the counterparty under current law, Fitch's analysis relies on the counterparty being obliged to gross up for that tax on a nonterminable basis.

Tax Event upon Merger

This termination event typically applies to the SPV as the burdened party because payments made by the counterparty, or a successor entity, could be subject to withholding tax as a result of a merger involving the counterparty, and the counterparty or successor entity may not be obliged to gross up those payments. As the counterparty should be able to foresee whether, as a result of its merger, payments made by it or to it, or a successor entity, may be subject to withholding tax, Fitch's analysis relies on the counterparty being obliged to gross up for that tax on a nonterminable basis in order for the transaction not to be affected by a termination of the derivative. This termination event should therefore not apply to the counterparty as the affected and burdened party.

However, the SPV's ability to merge with another entity will be restricted in the transaction documents, making receipt of lower payments by the counterparty due to withholding tax applying as a result of the merger of the SPV improbable. For this reason, the counterparty is not considered the burdened party for this termination event, where the SPV is the affected party. In principle, however, it should not affect the rating analysis if this termination event applies to the counterparty as the burdened party where the SPV is the affected party, because a merger by the SPV would be a breach of the transaction document restrictions, and therefore not be within the scope of Fitch's rating.

Credit Event upon Merger

The risk of an SPV triggering a credit event by merging with another entity is mitigated in transactions, as the SPV is typically an independent, bankruptcy-remote entity established solely for its role in the transaction. It is therefore restricted in the transaction documents from doing other business or merging with another entity. Due to the limited ability to merge, the application or disapplication of the credit event upon merger to the SPV is less relevant, and so it is typically disapplied.

This termination event may or may not apply to the counterparty from a rating perspective. It is Fitch's view that a potential deterioration in the creditworthiness upon merger would be addressed by credit deterioration provisions.

Additional Termination Events

ATEs can be negotiated between the transaction parties and are documented in the ISDA schedule. One example of an ATE that is sometimes used is a breach of agreement by the SPV, as discussed above.

Another typical example of an ATE used in SF and CVB derivatives is the failure of the counterparty to comply with the contractual terms, such as the collateral posting and replacement provisions. Fitch would consider the counterparty the sole affected party, with the effect that the SPV has the right, but not the obligation, to call for a termination. Any termination payments due would typically be subject to a transaction's priorities of payment and contractually subordinated.

Fitch's analysis relies on the documentation stipulating that a failure of a counterparty to comply with the collateralization and replacement provisions will cause an ATE. Sometimes this obligation for a counterparty is subject to an "efforts threshold." For example, by requiring only "best efforts" or "commercially reasonable efforts." Fitch will take rating action on the rated notes if it considers the remedial actions taken by a counterparty insufficient, notwithstanding any efforts thresholds, and notwithstanding any exercise or non-exercise of termination rights following an ATE, and if the insufficiency is material to Fitch's rating analysis.

Determination of Termination Payment Amounts

Payments upon early termination are handled differently by the 1992 and 2002 ISDA master agreements and can also receive different treatment if EoDs, termination events or ATEs occur.

The 1992 ISDA master agreement provides for two payment methods — first method and second method — and two payment measures — market quotation and loss. If early termination results from an EoD, the first method provides that payments upon termination will be due only to the nondefaulting party, such that the defaulting party is not due any payment even if it was in the money upon termination. The second method provides that payments upon termination are due to the party in the money upon termination, regardless of whether the party is the defaulting or the nondefaulting party.

The market quotation payment measure is defined as an amount determined by reference to the market for an instrument similar to the terminated derivative. The loss payment measure is defined as the sum of total losses and costs suffered by, or gains of, the nondefaulting party upon termination of the derivative, determined reasonably and in good faith by the nondefaulting party.

Derivatives in securitizations using the 1992 master agreement typically use the second method and market quotation. Under this arrangement, the nondefaulting party presents the derivative terms to a prescribed number of dealers that will be asked to quote a price to take over the derivative from the defaulting counterparty. If three or more quotations can be obtained, the arithmetical mean of the three quotations will be taken, and the party that is out of the money will have to pay that amount to the party that is in the money. There will also be an account taken of any unpaid amounts that arise on or before the date of termination.

If early termination results from a termination event rather than an EoD, the course of action depends on whether one or both parties have been affected. If there is one affected party, the payment method is identical to the second method, regardless of whether the schedule calls for the first or second method. The payment measure applied will be market quotation or loss, as set out in the schedule. The affected party is treated as the defaulting party and the party that is not affected as the nondefaulting party, for both payment method and payment measure.

If both parties are affected and market quotation applies, each party obtains a settlement amount through the market quotation method previously described, and the payment amount is equal to half of the difference of the two results. If both parties are affected and loss applies, each party calculates its loss as a result of the derivative's termination, and the payment amount is equal to half of the difference of the two results.

The 2002 ISDA master agreement handles early termination payments in a slightly different manner. Payments methods and payment measures do not have to be set out in the schedule, as the agreement calls for the same payment method and payment measure in all events.

If early termination arises by virtue of an EoD, the nondefaulting party determines the close-out amount. This is essentially the amount of losses or costs or gains of the nondefaulting party in replacing or in providing to the nondefaulting party the economic equivalent of the material terms of the derivative. To calculate this, the nondefaulting party can use information such as third-party quotations and relevant market data. As with the second method previously described, payment could be due to either the defaulting or the nondefaulting party as a result of this calculation. There will also be an account taken of any unpaid amounts that arise on or before the date of termination.

If early termination results from a termination event, and if there is one affected party, the calculation would be handled as with an EoD, whereby the affected party is treated as the defaulting party and the party that is not the affected party as the nondefaulting party. If both are affected, each party calculates an amount in accordance with the paragraph above, and the payment amount is equal to half of the difference of the two results.

The determination of early termination payments (whether arising from an EoD or a termination event) can have a material impact on the cash flow of transactions and therefore needs to be considered in the rating analysis. Transaction documentation typically follows some basic principles — irrespective of the master agreement (1992 or 2002) used for a transaction — to achieve a determination of a sum payable upon termination equivalent to the costs of a replacement derivative instrument, particularly if the replacement of a derivative contract in the transaction is the ultimate goal. These include the following:

1. The termination payments are determined by seeking at least three actual quotes from eligible counterparties for derivatives on substantially the same terms as the existing derivative.
2. The quotes reflect the amount the eligible counterparty is willing to pay or receive to execute a replacement derivative, often referred to as the MtM of the derivative.
3. If initially unsuccessful in obtaining these quotes, this process is repeated or continues for at least 45 business days.
4. Where the replacement occurs, the amount the eligible counterparty pays or receives to execute a replacement derivative is used for determining the termination payment.
5. Where no replacement occurs because the necessary quotes are not obtained within the prescribed period, the termination payment can be determined in the manner permitted by the ISDA master agreement.

Where specific transaction documentation materially deviates from the above principles, Fitch assesses the rating impact on a case-by-case basis.

Covered Bond Derivative Counterparties

This section provides an overview of Fitch's approach to assessing interest rate and cross currency exposures within CVB programs and supersedes analytical steps described in the previous sections of the report for the analytical concepts described in this section. Fitch's analysis relies on such mismatches to be mitigated either by the presence of a highly rated issuer, documented internal derivative arrangements or external derivative arrangements. Where such mitigants do not exist, any interest rate or cross-currency mismatches can constrain the rating of the CVB.

In its quantitative analysis, Fitch will only take into account derivative agreements that are in place prior to the insolvency of the issuer and expected to continue following an insolvency of the issuer. Privileged derivatives, entered into between the issuer on behalf of the cover pool, and a derivative counterparty, are designed to survive the issuer's insolvency.

Recovery Uplift analysis is typically not sensitive to derivative counterparty risk, as opposed to programs which are also tested for timely payment of CVB in rating scenarios above the resolution reference point. As a consequence, when CVB programs are tested for timely payments, the left-hand column of figures in this addendum refer to the timely payment rating level, rather than the assigned CVB rating. Generally, derivative counterparties have a preferential claim, ahead of other unsecured creditors of the issuer, against the pool of assets securing the CVB, and commonly rank pari passu with CVB holders.

Highly Rated Issuers

For issuers with a minimum Long-Term Rating of 'AA–' or a Short-Term Rating of 'F1+', Fitch does not stress any unhedged interest rate or currency mismatches in its qualitative analyses, as the risk of jump to default is viewed as sufficiently remote. Upon the issuer losing its highly rated condition, Fitch will reflect interest rate and currency risk in its cash flows, should the issuer fail to implement remedial action within the applicable remedy period or should any interest rate and/or currency mismatch remain unhedged.

For highly rated issuers, when remedial actions, including collateral posting, are set at the loss of 'AA–' and 'F1+', and the program documentation specifies an action plan to hedge any unhedged interest rate or currency exposure, such as contingent swap documents, issuers benefit from an extended remedial period of 60 calendar days. If the documentation does not include remedial actions or it reflects triggers as detailed in Figure 1, Fitch relies on the standard remedial timeframe.

Figure 9

Highly Rated Issuers

CVB Timely Payment Rating Level	Minimum Issuer Rating
AAA	AA– or F1+
AA	AA– or F1+

Source: Fitch Ratings.

Eligible without Collateral Issuers

Where the rating of the issuer is sufficient to support the timely payment rating level of the CVB without collateral (as per *Derivative Risk Rating Table* in Figure 1) and the program documents define the conditions of the hedging to be concluded upon the issuer being downgraded below the minimum primary risk ratings, such as contingent swap documents, Fitch will rely on the predefined hedging terms in its qualitative analysis. The issuer's commitment to enter in the preconvened hedging agreement is viewed as sufficiently robust, and the jump to default risk as sufficiently remote, as long as the issuer is considered to be eligible without collateral.

Upon the creditworthiness of an issuer falling below the minimum primary risk ratings specified in Figure 1, Fitch's analysis relies on any interest rate and/or cross-currency mismatches being mitigated in accordance with the documented terms within 30 calendar days. Fitch will reflect interest rate and currency mismatches in its cash flow analysis should the issuer fail to implement the documented derivative agreement with an eligible external derivative

counterparty or an internal counterparty with the required collateral amount, or should any interest rate and/or currency risk exposures remain unhedged.

Internal Derivative Counterparties

Fitch defines an internal derivative counterparty as either the same entity as the issuer or one that is closely related, such as a wholly owned subsidiary. Fitch's analysis relies on internal counterparties to meet the standard definition of an eligible derivative counterparty, as set out in *Derivative Risk Rating Table* (Figure 1), in line with SF transactions.

Fitch believes internal derivative counterparties do not provide incremental protection to CVB investors against interest rate and currency risk as there is no benefit from a dual recourse to the issuer and to the derivative counterparty. However, the formalization of derivative agreements consistent with these criteria is a useful interim step toward the appointment of an external derivative counterparty, should the creditworthiness of the issuer deteriorate further, such that the upfront formalization of derivative arrangements, including collateral posting arrangements and replacement language, offers some protection to CVB investors.

Where any aspects of internal derivative structures give rise to concerns regarding the ability to obtain an external replacement, Fitch will assume a replaceable hedging, partial or no hedging in its cash flow modelling.

External Derivative Counterparties

An external derivative counterparty is defined by Fitch as an entity that is unrelated to the issuer. In Fitch's opinion, the dual recourse to the issuer and an eligible external derivative counterparty leads to a lower degree of reliance upon the derivative counterparty compared with a SF transaction, which has no such dual recourse. Fitch looks at both the issuer and the counterparty creditworthiness relative to the CVB timely payment rating level. This is based on the payment obligations of both the issuer and the derivative counterparty, as CVB investors would only be exposed to losses from a defaulted derivative counterparty if the issuer defaulted as well.

The definition of counterparty eligibility for external counterparties is consistent with the definition of an eligible internal counterparty, and replacement relies on counterparty ratings per the *Derivative Risk Rating Table* in Figure 1. However, Fitch's collateral posting expectations are generally lower for CVBs with external derivative counterparties and issuers rated at least 'BBB–' or 'F3', compared to those for CVBs with internal counterparties and SF transactions, as defined in the table below.

Figure 10

Collateral Posting Formulas for Minimum Counterparty Long-Term Ratings or Short-Term IDRs when Issuer Is Rated Above BBB or F3

CVB Timely Payment Rating Level	No Collateral	Base[a]	Formula 1	Formula 2
AAA	A or F1	A– or F2	BBB– or F3	N.A.
AA	A– or F1	BBB+ or F2	BBB– or F3	N.A.
A	BBB or F2	BBB– or F3	BB+	N.A.
BBB	BBB– or F3	N.A.	N.A.	BB–
BB	N.A.	N.A.	N.A.	B+
B	N.A.	N.A.	N.A.	B–

[a]Base formula: Collateral Amount = Max (0; Mark-to-market). CVB – Covered bond. PD – Probability of default.
N.A. – Not available.
Source: Fitch Ratings.

Figure 11

Collateral Posting Formulas for Minimum Counterparty Long-Term Ratings or Short-Term IDRs when Issuer Is Rated BBB or F3

CVB Timely Payment Rating Level	No Collateral	Base[a]	Formula 1	Formula 2
AAA	A or F1	A– or F2	N.A.	BBB– or F3
AA	A– or F1	BBB+ or F2	N.A.	BBB– or F3
A	BBB or F2	N.A.	BBB– or F3	BB+
BBB	BBB– or F3	N.A.	N.A.	BB–
BB	N.A.	N.A.	N.A.	B+
B	N.A.	N.A.	N.A.	B–

[a]Base formula: Collateral Amount = Max (0; Mark-to-market). CVB – Covered bond. PD – Probability of default.
N. A. – Not available.
Source: Fitch Ratings.

For issuers rated below 'BBB–' and 'F3' the standard collateral posting formulas detailed in Figure 2 will apply.

Events of Default and Early Termination Events

Some standard ISDA events of default and termination events should not be applied to the CVB issuer to safeguard the continuity of the derivatives after issuer insolvency, as in SF transactions. Fitch does not expect failure to pay, bankruptcy and any other events directly applicable to the CVB issuer to lead to early termination of derivatives.

Where the CVB issuer has been established exclusively to purchase cover assets and issue CVBs, a failure to pay by the issuer is equivalent to an inability to make timely payments on the CVBs; that is the case for issuers of French "obligations foncières" and "obligations de financement de l'habitat" and Norwegian covered bonds issuers. The derivative arrangements may therefore include termination events linked to the issuer's performance without affecting the rating of the CVBs.

Senior or Pari Passu Termination Payments

If a swap is terminated, in addition to leaving the cover pool unhedged against future rate movements, a senior or pari passu ranking termination payment due from the covered pool to the counterparty can cause a liquidity stress for the CVB issuer that could affect the ability to make payments to bondholders.

Transaction documents can require subordination of termination payments in the priority of payments when the derivative counterparty is the defaulting party, which is a flip clause. In some covered bond regimes, such as French "obligations foncières" and "obligations de financement de l'habitat" and German Pfandbriefe, derivative termination payments rank pari passu with the CVB payments.

Default by External Counterparty

A termination payment for derivatives with external counterparties falling would only affect CVB holders if the following is true: the counterparty defaults, triggering the termination payment; the CVB issuer has also defaulted and is unable to fund the payment; the swap is not replaced on a timely basis; and the swap is out of the money for the CVB issuer. Fitch considers this combination of events sufficiently remote and generally does not modify its rating analysis of a CVB program with external derivatives with senior or pari passu termination payments.

Default by Internal Counterparty

A default of the counterparty and the CVB issuer would coincide for derivatives with internal counterparties, and therefore Fitch regards the risk of a termination payment falling due to the counterparty as less remote than in the scenario of an external counterparty.

As with SF, the risk can be mitigated by applying an adjusted eligibility threshold to the derivative counterparty, on the basis that an earlier trigger for replacement action will reduce the likelihood of the internal counterparty defaulting in advance of replacement. The applicable eligibility thresholds are shown in the column 'No Valid Flip Clause' in Figure 1.

Alternatively, for CVB programs with unsubordinated termination payments, internal counterparties, and no other structural mitigants, Fitch can link the rating of the bonds to the rating of the CVB issuer, if it considers the liquidity risk, stemming from the termination payment falling due, to be material and insufficiently mitigated.

Variations from Criteria

Fitch's criteria are designed to be used in conjunction with experienced analytical judgment exercised through a committee process. The combination of transparent criteria, analytical judgment applied on a transaction-by-transaction or issuer-by-issuer basis, and full disclosure via rating commentary strengthens Fitch's rating process while assisting market participants in understanding the analysis behind the ratings.

A rating committee may adjust the application of these criteria to reflect the risks of a specific transaction or entity. Such adjustments are called variations. All variations will be disclosed in the respective rating action commentaries, including their effect on the rating where appropriate.

A variation can be approved by a ratings committee where the risk, feature, or other factor relevant to the assignment of a rating and the methodology applied to it are both included within the scope of these criteria, but where the analysis described in the criteria requires modification to address factors specific to the particular transaction or entity.

Limitations

Ratings, including Rating Watches and Outlooks, assigned by Fitch are subject to the limitations specified in Fitch's Rating Definitions, available at www.fitchratings.com/site/definitions.

Data Sources

Fitch's analysis is based on information provided by the issuer or the arranger (if any). The rating process can also incorporate publicly available information or information provided by other third-party sources. If material to the rating, the agency will disclose other relevant sources.

Appendix 1 — Advance Rates

The advance rates shown in below table apply where the collateral is posted in the same currency as that of the derivative counterparties' payment obligations.

Figure 12

Advance Rates for Sovereign Bonds Rated at Least AA– and F1+

Sovereign Bond Issuer	Sovereign Bond Maturity	Highest-Rated Note AA–sf or Higher (%)	Highest-Rated Note A+sf or Lower (%)
Australia and New Zealand	<1 Year	98.5	99.0
Australia and New Zealand	1–3 Years	97.0	98.0
Australia and New Zealand	3–5 Years	94.5	96.0
Australia and New Zealand	5–7 Years	92.0	94.5
Australia and New Zealand	7–10 Years	89.0	93.0
Denmark and Sweden	<1 Year	98.5	99.0
Denmark and Sweden	1–3 Years	96.5	97.5
Denmark and Sweden	3–5 Years	93.5	95.5
Denmark and Sweden	5–7 Years	91.5	94.5
Denmark and Sweden	7–10 Years	88.5	92.5
Eurozone	<1 Year	98.5	99.0
Eurozone	1–3 Years	96.5	97.5
Eurozone	3–5 Years	93.5	96.0
Eurozone	5–7 Years	91.5	94.5
Eurozone	7–10 Years	89.5	93.0
Eurozone	10–30 Years	75.0	82.5
Singapore	<1 Year	97.5	98.0
Singapore	1–3 Years	94.5	95.5
Singapore	3–5 Years	91.5	93.0
Singapore	5–7 Years	87.0	89.0
Singapore	7–10 Years	81.5	84.5
Switzerland	<1 Year	98.5	99.0
Switzerland	1–3 Years	97.5	98.0
Switzerland	3–5 Years	95.5	97.0
Switzerland	5–7 Years	94.5	96.0
Switzerland	7–10 Years	93.5	95.5
UK	<1 Year	98.5	99.0
UK	1–3 Years	96.5	97.5
UK	3–5 Years	92.0	94.5
UK	5–7 Years	91.0	94.0
UK	7–10 Years	89.5	93.0
UK	10–30 Years	80.0	87.0
U.S. and Canada[a]	<1 Year	97.5	98.0
U.S. and Canada	1–3 Years	96.0	97.0
U.S. and Canada	3–5 Years	93.5	94.5
U.S. and Canada	5–7 Years	93.0	94.0
U.S. and Canada	7–10 Years	91.0	92.5
U.S. and Canada	10–30 Years	80.0	87.0

[a]The U.S. and Canada advance rates are also applicable for Hong Kong.
Source: Fitch Ratings.

Figure 13

Advance Rates for Sovereign Bonds Rated at Least A and F1

Sovereign Bond Issuer	Sovereign Bond Maturity	Highest-Rated Note AA–sf or Higher	Highest-Rated Note A+sf or Lower
Eurozone	<1 Year	95.0	96.5
Eurozone	1–3 Years	88.0	92.0
Eurozone	3–5 Years	83.0	88.5
Eurozone	5–7 Years	78.0	85.5
Eurozone	7–10 Years	78.0	85.5
Eurozone	10–30 Years	77.5	85.0
Japan	<1 Year	99.0	99.0
Japan	1–3 Years	97.0	98.0
Japan	3–5 Years	94.5	96.5
Japan	5–7 Years	92.0	94.5
Japan	7–10 Years	87.5	92.0
Japan	10–30 Years	71.0	81.0

Source: Fitch Ratings.

The FX advanced rates (ARs) shown in the *Advance Rates for FX Mismatches* table below apply, in addition to those shown in the *Advance Rates for Sovereign Bonds Rated at Least 'AA–' and 'F1+'* table and the *Advance Rates for Sovereign Bonds Rated at Least 'A' and 'F1'* table whenever a currency mismatch is present between the currency of the collateral and the obligations of the counterparty. If foreign currency government bonds are provided, both the AR for FX risk and the security AR will be multiples. The FX ARs are applicable for currency pairs within Australian dollars, Canadian dollars, Swiss francs, Czech koruna, Danish kroner, euros, UK pounds, Norwegian kronor, New Zealand dollars, Japanese yen, Korean won, Swedish kroner, Singapore dollars, Hong Kong dollars and U.S. dollars.

Figure 14

Advance Rates for FX Mismatches

	Highest-Rated Note AA– or Higher	Highest-Rated Note A+ or Lower
Advance Rate (%)	86.0	90.5

Source: Fitch Ratings.

Appendix 2 — Validation of Advance Rates

ARs are designed to provide coverage for movement in a collateral's market value over time, or the collateral's market value risk. For instance, for a collateral security with a 95% AR, 105.3% of securities would be posted to cover the potential exposure. ARs are a function of the exposure period, which is hereafter taken to be 45 business days, the time assumed to be needed to find a replacement derivative counterparty. Fitch's analysis relies on at least weekly collateral valuation and posting.

Fitch has developed the ARs through historical worst-loss stress testing. Fitch performs a periodic review of the ARs using the methodology described in this report. Fitch's AR determination is primarily based on the 99.5 percentile of historically observed loss experiences for each collateral type, as observed through benchmark indices starting in the early 1980s for most securities. Even if future analysis indicates more positive and/or stable asset performance than implied in the presented ARs, Fitch can leave the ARs unchanged.

Fitch can provide ARs case by case for collateral types other than those included in *Appendix 1*. Fitch assumes collateral in cross-currency derivatives will be posted in the currency that the SPV receives from the derivative — usually the same currency as the notes issued by the SPV. Where the collateral is denominated in a different currency to the note currency or where FX risk arises for other reasons, Fitch's analysis relies on both the specific currency AR and the specific collateral AR to be applied where the collateral is denominated in a different currency to the note currency or where FX risk arises for other reasons, by multiplying both Ars.

Quantitative Analysis and Modeling

Fitch conducts a base-case stress for each collateral type, considering observed historical losses and the volatility and liquidity of the given collateral type. The base-case stress is then converted into a stressed loss at each rating level by multiplying the base-case stress by a representative factor for higher rating stress scenarios.

Volatility

Fitch's analysis of a given asset category is based on the 99.5 percentile of historically observed loss experiences by the asset type, given a rolling 45 business day exposure period. The analysis uses historical price data drawn from an asset's representative index. For example, Fitch uses the benchmark indices for various bond maturities provided by Thomson Reuters' DataStream for government bonds. At times, Fitch uses multiple indices for its analysis, looking at both price volatility and index constituents. Indices used have at least 10 years of available data, but often data is available from the early 1980s.

Liquidity

Fitch views market liquidity in periods of stress to be particularly relevant for ARs. However in light of Fitch's definition of qualified investments (see "Structured Finance and Covered Bonds Counterparty Rating Criteria" for more detail) and the resulting eligible collateral, Fitch assumes liquidity to be available in most cases, and therefore applies no additional stresses.

Expected Loss

Fitch calculates a base-case stress for each asset class based on the percentile approach. Fitch classifies each base-case stress as consistent with a particular rating stress, after reviewing the main loss drivers, the scale of decline during the specific economic period, and the magnitude of the percentile loss compared to other historical losses.

Once a rating level is determined for each base-case stress, the stress is increased using corresponding multipliers to reflect higher expected losses under higher rating stress scenarios. The multiplier is based on historical asset performance by rating category. For example, to increase a 'BBB' stress to a 'AAA' level, a multiple of two is used. Therefore, if an asset class's observed 99.5 percentile loss for a 45 business day period is 11%, and this loss is considered consistent with a 'BBB' stress, an 'AAA' level worst loss is estimated at 22% over the 45 business day period.

Appendix 3 — Validation of Volatility Cushions

VCs for interest rate and cross-currency swaps are intended to protect against the risk that after a counterparty default the MtM amount posted is insufficient to cover the replacement cost of a derivative due to a change in the market value of the swap since the most recent collateral posting date.

Fitch views VCs for same-currency fixed/floating interest rate swaps to be generally adequate to cover for a 50bp parallel shift in the short- to medium-term swap curves in a 'Asf' scenario, and a 75bp parallel shift in a 'AAAsf' scenario. Fitch considers that for cross-currency swaps, as shown in the *VCs for Cross-Currency Swaps* table, movements in the FX spot rate are the key driver of value volatility, with interest rate elements having a lesser impact. VCs for cross-currency swaps are sized to cover for an assumed 7.5% shift in the FX spot rate in a 'Asf' scenario and an assumed 11.25% shift in a 'AAAsf' scenario plus an additional portion to cover for interest rate volatility, depending on the swap structure.

Fitch derived these stress scenario assumptions from historically observed movements over a 45 business day period. However, Fitch recognizes that actual replacement timings can vary after a counterparty insolvency.

The interest element for floating/floating rate cross-currency swaps is sized at 50% of the VC for same-currency basis rate swaps. Fitch chose the 50% factor, rather than 100%, to reflect the potential that FX and basis rate shocks do not have a simultaneous negative effect.

The additional interest rate volatility element in cross-currency swaps with a fixed/floating rate component is sized at 50% of the VC for the corresponding interest rate swap. Fitch chose the 50% factor, as opposed to 100%, to reflect the potential that the FX and swap curve shocks do not have a simultaneous negative effect.

The additional interest rate volatility element for cross-currency swaps with a fixed/fixed rate component is sized at 100% of the VC for the corresponding interest rate swap. Fitch chose the 100% factor, rather than 200%, to reflect the potential that that FX and swap curve shocks do not have a simultaneous negative effect. Values shown in VCs for Interest Rate Swaps, Caps, Floors and Collars table and *VCs for Cross-Currency Swaps* table have been rounded to the nearest 0.25%.

To analyze the relationship between input shocks to the assumed swap curve and/or FX spot rate and the swap valuation, Fitch conducted testing on a range of hypothetical swap structures using the Bloomberg Swap Manager tool and Fitch-defined scenarios. Fitch reviewed the adequacy of the defined scenarios in the context of historical movements in FX spot rate and interest rate swap curve movements over a 45 business day period. In certain historical observations, observed FX and swap curve movements have exceeded those assumed in the derivation of the VCs. In light of the secondary nature of the risk, such that the counterparty is primarily responsible to fund the replacement cost, Fitch generally excluded the worst 2.5%–5.0% of historical observations when validating the 'Asf' shock scenarios.

If a counterparty default coincides with an extreme movement in interest or FX spot rates, the amount of collateral can prove insufficient to fully replace a swap because of the exclusion of extreme scenarios. The *Selected FX Spot Movements Over a 45 Business Day Period* table below shows selected FX spot movements in 2007 and 2008.

Figure 15

Selected FX Spot Movements over 45-Business Day Period

	BoE Liquidity Drawing by Northern Rock	Bankruptcy Filing of Lehman Brothers	UK Government Bank Rescue Package
Start Date	Sept. 14, 2007	Sept. 15, 2008	Oct. 13, 2008
End Date	Nov. 15, 2007	Nov. 14, 2008	Dec. 12, 2008
Base Currency	GBP	USD	GBP
GBP (%)	N.A.	22.1	N.A.
AUD (%)	(3.2)	24.5	(9.4)
EUR (%)	(3.3)	13.0	(12.4)
JPY (%)	(2.6)	(7.3)	(22.9)
USD (%)	1.9	N.A.	(13.8)

BoE – Bank of England. N. A. – Not available.
Source: Fitch Ratings.

Fitch did not directly use these observations to derive the criteria VCs. However, they demonstrate the level of FX spot volatility around recent bank events. The criteria VCs would not cover for the late 2008 movements resulting from the Lehman Brothers' default and several UK banks receiving support packages, which coincided with extreme interest rate reductions in several countries.

Appendix 4 — Collateral Amount Example Calculations

Figure 16

Example 1

Type	Interest Rate Basis Swap
Notional	100,000,000
Weighted Average Life	10 years
Balance-Guaranteed?	No
Notes' Rating	AAAsf
Mark-to-Market	1,000,000
Volatility Cushion (%)	0.75
Counterparty Rating	A−/F2 (formula No. 1 is applicable)
Liquidity Amount	1 + 0% (fixed schedule Libor swap)
Collateral Amount	= Max (0; 1,000,000 + (1.00 * 0.75% * 60% * 100,000,000))
	= 1,450,000

Source: Fitch Ratings.

Figure 17

Example 2

Type	Fixed/Floating Interest Rate Swap
Notional	100,000,000
Weighted Average Life (WAL)	25 years
Balance-Guaranteed?	Yes
Notes' Rating	AAAsf
Mark-to-Market	(1,000,000)
Volatility Cushion (%)	9.50
Counterparty Rating	BBB/F3 (formula No. 2 is applicable)
Liquidity Amount	(1 + 25%) * (1 + Max[0%; 5% * (25 - 20)]) = 1.25 * 1.25
	= 1.5625 (balance-guaranteed swap with long WAL)
Collateral Amount	= Max (0; -1,000,000 + [1.5625 * 9.50% * 100,000,000])
	= 13,843,750

Source: Fitch Ratings.

Figure 18

Example 3

Type	Cross-Currency Fixed/Floating Swap
Notional	50,000,000 (in domestic currency)
Weighted Average Life	5 years
Balance-Guaranteed?	No, fixed schedule
Notes' Rating	AAAsf
Mark-to-Market	15,000,000
Volatility Cushion (%)	13.0
Counterparty Rating	BBB/F3 (formula No. 2 is applicable)
Liquidity Amount	(1 + 0%) * (1 + Max [0%; 5% * (5 - 20)]) = 1.00 * 1.00
	= 1.00 (non-esoteric FX swap)
Collateral Amount	= Max (0; 15,000,000 + [1.00 * 13.0% * 50,000,000])
	= 21,500,000

Source: Fitch Ratings.

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