Criteria Report

Covered Bonds Rating Criteria – Stop or Continue?

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Fitch is hereby opening a one-month consultation period and solicits comments from market participants on whether the discontinuity factor as presented in this report adds value to the covered bonds analysis.

Feedback should be sent to cvb.feedback@fitchratings.com before 18 August 2006.

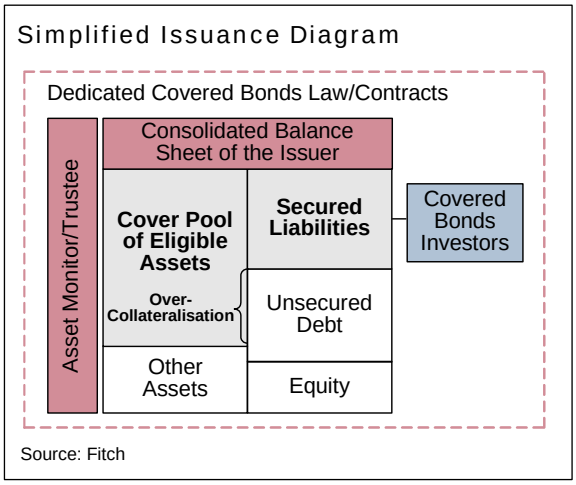
Introduction

In an ideal world, credit analysts would study the legal and regulatory framework or the contractual agreements governing the issuance of covered bonds, and would be able to conclude whether they meet the conditions necessary for this secured instrument to survive the insolvency of its issuer unscathed. Depending on the outcome, covered bonds would then either reach a higher rating than their issuer, independently of the issuer's creditworthiness or, on the contrary, would be considered to have the same default likelihood as their issuer and, potentially, be assigned a higher rating solely owing to their privileged position with regard to recoveries in an insolvency scenario. In practice, however, the question of interruption or non-interruption of payments on the covered bonds in the event of an issuer default attracts a nuanced rather than a binary answer. Complete independence, notably, is hard to justify, as financial institutions remain in charge of their cover pool and can issue further covered bonds right up until their insolvency or the withdrawal of their licence.

This has prompted Fitch to develop a tool to enable analysts to grade covered bonds systems and cover pool-specific characteristics between the two extremes. The proposed "discontinuity factor" evaluates the obstacles to a smooth transition from the issuer to the cover pool as a source of payments on the covered bonds in the event of an issuer default. The agency has identified four key areas as influencing the continuity of covered bonds payments in such an event: segregation of the cover assets; alternative management; liquidity gaps; and covered bonds oversight. The discontinuity factor is derived from a weighted score of all four aspects and is used to determine the lowest achievable probability of default ("PD") for the covered bonds (corresponding to the highest rating achievable by the covered bonds on a pure PD basis). At worst, the covered bonds' PD will be equal to, but not higher than, the PD associated with the Issuer Default Rating ("IDR"). At best, it will equal the PD associated with the IDR, multiplied by the discontinuity factor.

Within this range of possible PDs for the covered bonds, the one retained by the agency will correspond to the highest level of stresses that the cover pool can withstand while still providing for the full and timely redemption of outstanding covered bonds in an amortisation scenario should the issuer default. To test this, Fitch simulates the behaviour of the cover pool in an economic downturn, and compares the stressed cash flows expected from the cover assets to the payments due on the covered bonds under third-party management.

Under the new approach, the rating assigned by Fitch to the covered bonds will be a function of the covered bonds' PD and the prospect of recoveries from the cover pool in the event of a covered bond default. It is worth noting that this methodology does not rely on an analysis of the joint PD of the issuer and its cover pool. Despite its intellectual attractiveness, the agency rejected this option owing to the difficulty of assessing the correlation between the two variables, and the lack of historical data on the defaults of both financial institutions and covered bonds.



■ Scoring for Continuity

Covered bonds are debt instruments issued by regulated financial institutions and secured on a pool of assets. The type of eligible assets is restricted by dedicated legislation or contractual agreements to, chiefly, mortgage loans and/or exposures to central or local governments. The legal, regulatory or contractual frameworks also prescribe how the preferential claims of covered bondholders over the cover assets would be exercised in a bankruptcy situation. In such circumstances, failure to pay interest or principal falling due on the covered bonds beyond the customary grace period would qualify as a default, even if ultimately followed by full recoveries. In the aftermath of an issuer default investors are therefore exposed to continuity risk, defined as the risk that the cash flows from the cover assets cannot assume the issuer's obligation to pay quickly enough to avoid a covered bond default.

Drivers of the Continuity Risk

In Fitch's view, four key areas must be factored in when measuring the risk that payments owed to covered bond investors may be interrupted in the event of an insolvency of their issuer:

- segregation of the cover assets backing the issues of covered bonds from the bankruptcy estate of the issuing financial institution;
- alternative management of the cover assets and the covered bonds;
- liquidity gaps between the respective amortisation profiles of the cover pool and the covered bonds; and
- dedicated covered bonds oversight.

Each carries its own weight in Fitch's discontinuity factor.

Assets Segregation (50% Weight)

The ring-fencing of the cover assets from the rest of an issuer's balance sheet is a prerequisite for any payment to be directed to covered bondholders. The immunity of the cover assets to any claims from unsecured creditors of the defaulted financial institution is achieved by virtue of law – often in the form of an exception to normal bankruptcy legislation, or through a transfer of the assets to a bankruptcy-remote special-purpose vehicle acting as a guarantor of the issued covered bonds. In all cases, Fitch reviews legal opinions and memos addressing the validity of the segregation provisions. Typical obstacles to a perfect segregation relate to the availability of excess overcollateralisation above the minimum legal threshold, debtors' set-off rights, and cross-border recognition of the covered bonds' preferential claims.

Alternative Management (15% Weight)

In practice, the prior-ranking access to the cover assets would be handled by a third-party manager in the event of an insolvency of the issuer. Fitch takes into consideration the framework or contractual clauses governing the substitute manager, together with the rapidity of its appointment, its potential conflict of interest in cases where a single administrator in a bankruptcy is taking care of both secured and unsecured creditors, and its responsibilities in the servicing or liquidation of the cover assets in order to meet payments due on the covered bonds. In addition to the theoretical provisions that allow an alternative manager to step in, Fitch investigates the availability of suitable parties in a given market. Furthermore, the organisation of the defaulted issuer's covered bonds business and, in particular, its IT systems would play a major role in facilitating or hampering the alternative manager's ability to take appropriate action in the short run after an issuer's insolvency.

Liquidity Gaps (30% Weight)

The cover assets will have to be sold or refinanced to bridge potential maturity mismatches if the natural amortisation profile of the cover pool does not perfectly match that of the covered bonds. At a macro level, Fitch assesses whether a sufficiently active market exists for the type of assets included in the cover pool, and how long it would take to carry out asset sales. At the cover pool level, the agency calculates a net liquid position by comparing the pool's revenues and the availability of substitute assets with the amount of interest and principal due on the covered bonds during an appropriate period, and considers whether this position is likely to be maintained in the future.

Covered Bonds Oversight (5% Weight)

The banking authorities' overall mission is to safeguard the stability of their domestic banking environment. Especially in countries where covered

bonds form a significant proportion of banks' funding, the regulators will be keen to avert a crisis of confidence in the safety of the instrument. The likelihood of support at the issuer level is already taken into account in the IDR assigned by the agency. Therefore the credit given to the oversight focuses on the involvement of regulators in the definition of covered bond-specific guidelines and in the monitoring of their risk factors. Although banking authorities may exercise pressure on peer banks to help out in a crisis situation, the discontinuity factor in fact reflects their propensity to act in a preventative way.

Calculating the Discontinuity Factor

Each component of the discontinuity factor is assigned a number of points, which are subsequently weighted as described above. The discontinuity factor calculated for a given kind of covered bond issued by a given financial institution is measured on a scale of 0% to 100%, where 0% stands for perfect continuity of covered bond payments upon an issuer default, and 100% stands for an automatic default of the covered bonds upon an issuer default.

In addition, three overriding rules are embedded in the scoring sheet, bringing the discontinuity factor up to 100% when:

- the Assets Segregation section does not attract a sufficiently high score;
- within the Alternative Management section, the issuer's organisation of its cover pool is deemed inadequate to ensure a safe takeover by a third-party administrator;
- under the Liquidity Gaps section, the covered bonds system imposes an acceleration of the covered bonds coupled with a freeze of all cash flows upon the insolvency of their issuer.

It is worth highlighting that the discontinuity factor takes into account both system-specific and issuer and/or cover pool-specific features (see Appendix 1). As a consequence, the discontinuity factor cannot be used to compare the relative strengths and weaknesses of the different covered bond frameworks.

Determining the Covered Bonds' Lowest Achievable PD

The covered bonds' lowest achievable PD is obtained by multiplying the PD associated with the IDR by the discontinuity factor. For the purpose of this formula, an idealised five-year cumulative default curve is used. To retrieve the rating consistent with the covered bonds' lowest achievable PD, the result of the calculation is then plotted back on the same curve (note that this curve is only used as a calibration tool). For example (see Appendix 2), an issuer rated 'A' with a discontinuity factor assessed at 40% would, in principle, be able to achieve a covered bond PD equivalent to a 'AA' rating. Since covered bonds constitute direct obligations of the issuing financial institution, their PD is, at most, equal to the PD associated with the IDR.

It is noteworthy that not all covered bonds will automatically be assigned the lowest achievable PD made possible by the discontinuity factor. Within the range of possible PDs for the covered bonds, Fitch will retain the PD corresponding to the highest rating scenario under which the cover pool is able to sustain the agency's stressed assumptions and still meet covered bond payments. Two types of analyses are conducted: at a static pool level, and at a dynamic level, comparing the cash flows expected from the cover pool to the cash flows due on the covered bonds.

Matrix: Maximum Covered Bonds Rating Achievable on a PD Basis

		Discontinuity Factor (%)									
Issuer IDR	**5-Year PD (%)**	**100.0**	**75.0**	**50.0**	**40.0**	**30.0**	**20.0**	**15.0**	**10.0**	**5.0**	**0.0**
AAA	0.030	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
AA+	0.094	AA+	AA+	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
AA	0.203	AA	AA	AA+	AA+	AAA	AAA	AAA	AAA	AAA	AAA
AA-	0.255	AA-	AA	AA+	AA+	AA+	AAA	AAA	AAA	AAA	AAA
A+	0.501	A+	AA-	AA-	AA	AA	AA+	AA+	AAA	AAA	AAA
A	0.561	A	A+	AA-	AA	AA	AA+	AA+	AAA	AAA	AAA
A-	0.787	A-	A	A+	AA-	AA-	AA	AA+	AA+	AAA	AAA
BBB+	1.016	BBB+	A-	A+	A+	AA-	AA	AA	AA+	AAA	AAA
BBB	1.582	BBB	BBB+	A-	A	A+	AA-	AA-	AA	AA+	AAA
BBB-	3.361	BBB-	BBB-	BBB	BBB	BBB+	A	A+	AA-	AA	AAA
BB+	5.355	BB+	BBB-	BBB-	BBB	BBB	BBB+	A-	A	AA-	AAA
BB	7.477	BB	BB+	BBB-	BBB-	BBB	BBB	BBB+	A-	AA-	AAA
BB-	11.007	BB-	BB	BB+	BB+	BBB-	BBB	BBB	BBB+	A	AAA
B+	15.370	B+	BB-	BB	BB+	BB+	BBB-	BBB	BBB	A-	AAA
B	19.616	B	B+	BB-	BB	BB+	BBB-	BBB-	BBB	BBB+	AAA
B-	25.53	B-	B	BB-	BB-	BB	BB+	BBB-	BBB-	BBB+	AAA
CCC+/CCC	32.475	CCC	B-	B+	BB-	BB-	BB	BB+	BBB-	BBB	AAA

Source: Fitch

■ Static Analysis

The static analysis focuses on the credit quality of the cover pool, in terms of the defaults and recoveries expected to arise, in any given rating scenario, during a wind-down situation.

The assessment of these risks depends on the nature and geographical location of the underlying assets or debtors, in accordance with existing methodologies developed by Fitch. The agency makes specific assumptions about the drivers of PD as well as the timing and magnitude of recoveries from the defaulted assets for each type of collateral and jurisdiction. Applying the same models and criteria as in structured finance transactions ensures consistency in the analytical treatment of a given type of asset, irrespective of whether it serves as collateral for covered bonds or securitisation issuance.

Residential Mortgage Pools

Fitch associates the propensity to default of residential mortgage borrowers with a combination of their ability and willingness to pay. A borrower's ability to pay is measured by the proportion of his monthly income spent on the instalment due under the mortgage loan (debt-to-income ratio) or the loan amount expressed as a multiple of the borrower's annual income (income multiple), which are the most commonly used affordability measures. Willingness to pay is driven by the amount of equity invested by the borrower in his property and is best expressed by the original loan-to-value ratio ("LTV"). The base PD is further adjusted depending on other factors, including borrowers' status, characteristics of the loans and the underwriting guidelines of the lender.

Recoveries on defaulted loans are typically assessed by taking into account the impact of declines in the value of the mortgaged properties, differentiated by region, together with the timing and costs associated with the recovery procedures in each specific jurisdiction.

For more information about Fitch's country-specific criteria for residential mortgage loans, please refer to the RMBS section of the agency's website www.fitchratings.com.

Commercial Mortgage Pools

Fitch calculates the PD for cover pools including commercial mortgage loans on the basis of a stressed debt service coverage ratio, which quantifies the capacity of the income generated by the property to fully meet the payments due under the loan, after accounting for volatility in the stream of expected cash flows and building in stressed capitalisation rates. Alternatively, historical defaults experienced by the issuer are used to form a base case, subsequently stressed to the set rating level.

Recoveries on defaulted loans are mainly driven by current LTV ratios and by the rental value declines applicable in the tested stress scenario.

Public Sector Pools

The PD for cover pools including bonds and loans issued by or granted to public sector entities is derived via Fitch's VECTOR model. The model calculates the pool's cumulative PD and distribution in the set rating scenario via Monte Carlo simulations by taking into account the creditworthiness of the assets, their maturity profiles and the correlation assumed between different classes of obligors (for a description of the methodology, please refer to the report "*Global Rating Criteria for Collateralised Debt Obligations*", dated 13 September 2004).

Assumptions based on historical experience and formulated together with Fitch's International Public Finance analysts are used to quantify the recoveries expected from defaulted public sector entities in the pool.

■ Cash Flow Analysis

The purpose of the dynamic analysis is to position the maximum rating achievable by the covered bonds on a pure PD basis between: a) the IDR; and b) the rating corresponding to the product of the discontinuity factor by the issuer's PD. Therefore, Fitch runs its covered bonds cash flow model under different rating scenarios, starting from the one corresponding to the covered bonds' lower achievable PD. If necessary, the analysis is reiterated at lower rating levels, down to the issuer's IDR until the model shows that the cover pool can successfully sustain the tested level of stresses. The covered bonds' PD will be set at the rating level associated with the highest sustained level of stresses, failing which it will revert to the IDR.

Fitch's proprietary cash flow model compares the cash flows from the cover pool with the payments due on the covered bonds in a wind-down scenario in which the assets are under the responsibility of an alternative manager following an issuer default, where no new assets enter the cover pool and further issuance of covered bonds is suspended. The simulation incorporates stressed assumptions about the credit risk of the cover assets as per the outcome of the static analysis, and about mismatches between the profile of the cover pool and the covered bonds in terms of maturity, interest rate and currency. Where available Fitch applies the same assumptions

and stresses as in structured finance transactions that are backed by the same type of assets as those in the cover pool. In addition, the assumed cost of an alternative manager is factored in. Overcollateralisation provides the only form of protection against all these identified risks that is available to covered bonds.

Issuer Default Timing Assumptions

When rating covered bonds above their issuer's IDR, Fitch always assumes that the issuer would have defaulted. The agency tests several timings of the issuer default and checks the worst-case scenario, rather than the outcome in each case, weighted by the issuer's PD at different dates. In fact, modelling the issuer default from day one may not necessarily be the most punitive case: in general, assuming that the issuer would default just ahead of a bullet maturity proves to be the most stressful scenario. However, the added value of such simulations decreases as the number of outstanding covered bonds with different maturities increases. As the amortisation profile of the liabilities better matches that of the assets, the pattern of cash flows from the aggregate covered bonds then tends to resemble that of a pass-through security. A further consideration is that excessive volumes of hard-bullet covered bonds maturing within a few months of one another place a major strain on the pool's ability of the pool to generate sufficient cash flows.

As a result, the need to test different issuer default timings in the future diminishes as the number of outstanding covered bonds and the degree of diversification across different maturity buckets increase. Fitch conducts its cash flow analysis by testing, in all cases, a series of issuer default timings in the first five years following a reporting date and ahead of all hard-bullet maturities if the total number of outstanding covered bonds is low. For issuers with a large number of outstanding covered bonds, additional default scenarios occurring after the five-year horizon will be tested ahead of hard-bullet maturities only if there is excess concentration of maturing covered bonds in a given five-year bucket. When modelling cash flows following an issuer default at a later point in time than the reporting date, Fitch will project the residual assets cash flows at this date, computing its stressed assumptions from this moment.

Maturity Mismatches

Maturity mismatches arising as a result of hard-bullet covered bonds being issued against a pool of amortising assets are among the key drivers of the cash flow analysis. The effects of potential liquidity shortfalls that occur shortly after the default of the issuer are disregarded, as these are already taken into account by the discontinuity factor.

Temporary liquidity surpluses or shortfalls may arise, which would place a strain on the resources available to covered bondholders. In the first case, Fitch models any cash not needed to repay liabilities as being reinvested at sub-EURIBOR rates. In the event of shortfalls, the cash flow model is run under the hypothesis that an alternative manager would be able to raise finance by either selling parts of the cover pool or borrowing against the segregated assets. In both cases, different assumptions are factored in for the cost at which refinancing could be obtained in a stressful environment. These include, among others, the cost of funding for a potential buyer/lender, as well as other potential "haircuts" that may apply if large amounts of liquidity must be obtained within a relatively tight timeframe. Fitch considers the existence of a liquid market for the underlying assets when assessing the maximum amount of loans or bonds that could be disposed of by the manager within a given time horizon.

Interest Rate and Currency Mismatches

Cover assets and covered bonds may bear a fixed or variable rate of interest and be denominated in several currencies. Exposures to market risks are typically reduced either by matching the composition of assets and liabilities ("natural hedge") or through interest rate and cross-currency swaps.

Fitch's cash flow analysis gives credit to those swap contracts which benefit from the same privilege as covered bonds, i.e. which would share the same likelihood of interruption of payment upon an insolvency of the issuer, and would therefore protect investors thereafter. Furthermore, all relevant swap documents must contain wording and provisions that comply with the agency's guidelines (see "*Counterparty Risk in Structured Finance Transactions*", dated 13 September 2004 and available at www.fitchratings.com).

Residual open interest rate positions are tested in a base case as well as by applying upward and downward stresses to the relevant interest rate indices. Fitch's Structured Finance groups have developed a series of criteria covering the appropriate interest rate stresses that are applied in the rating analysis. For more information on the methodology please refer to the report "*Interest Rate Risk in Structured Finance Transactions: USD LIBOR*", dated 3 March 2006.

Fitch takes into account the effect of any currency exposure by incorporating FX volatility into its cash flow analysis, using its standard assumptions (see "*Fitch Ratings' Approach to Foreign Exchange Risk*

in Collateralised Debt Obligations", dated 26 March 2003) under a stress commensurate with the tested rating scenario. As in the case of interest rates, base case, appreciation and depreciation scenarios are run to test the pool's capacity to withstand adverse market shocks.

Credit to Overcollateralisation

Nearly all covered bonds issuers maintain a safety cushion overcollateralisation above the percentage required by law, regulations or contracts. But covered bondholders are exposed to the risk that this excess collateral could vanish in the run-up to an issuer's insolvency, as cover assets may be removed and used for other purposes or simply not replaced upon redemption, or as new covered bonds may be issued up to the maximum allowed level.

Therefore, Fitch may run its covered bonds cash flows model starting from a lower overcollateralisation than the percentage available as of the reporting date. By convention, the cover asset profile will then be proportionally reduced down to the level corresponding to the overcollateralisation assumed to be available at the time of an issuer default. The agency will give credit, in decreasing order of comfort, to the following (when available):

- contractual commitments, if legally binding and enforceable against the issuer;
- non-contractual public statements and/or covenants – such as undertakings given in the bank's annual reports or published on the investor relations section of the issuer's website;
- the bank's internal guidelines.

If none of the above is available, and as long as the issuer's Short-term rating stands at least at 'F2', the agency will base its calculations on the lowest level of overcollateralisation recorded over the preceding 12 months.

For issuers with a Short-term rating of 'F3' or below, in the absence of valid contractual or otherwise public commitments, the cash flow analysis will be run by giving credit to the minimum level of overcollateralisation, if any, required by the relevant covered bond legislation and/or regulations.

This proposed treatment goes some way towards mitigating the potential impact of volatile overcollateralisation rates on the stability of covered bonds ratings. However, all else being equal, a sudden drop in available overcollateralisation may result in the downgrade of the covered bonds' rating.

■ Credit to Recoveries Given Default

Recovery Ratings are assigned to reflect the expected recovery values for investors if the covered bonds default.

The recovery prospects are assessed, at the time of a supposed default, by calculating the net present value of the cash flows expected from the cover pool in a stressed scenario corresponding to the highest achievable rating for the covered bonds (after giving credit for recoveries) and comparing them with the notional balance of the outstanding covered bonds. This percentage will map to a Recovery Rating between 'RR1' (the highest) and 'RR6' (the lowest), as shown in the table below. The final covered bond rating will therefore be higher, equal to or potentially lower than the rating corresponding to the covered bond's PD, depending on the percentage of recoveries expected from the cover pool.

Recovery Ratings and Notching

Recovery Rating	Recovery Prospects	Recovery Bands Given Default (%)	Maximum Notching	
			IG	Non-IG
RR1	Outstanding	91-100	+2	+3
RR2	Superior	71-90	+1	+2
RR3	Good	51-70	+1	+1
RR4	Average	31-50	-	-
RR5	Below Average	11-30	-1	-1
RR6	Poor	0-10	-1/-2	-2/-3

IG: Investment-grade category
Non-IG: speculative-grade category
Source: Fitch

Soft caps may apply to the maximum number of notches shown in the above table depending on the country of the issuer. However, the enactment of dedicated covered bond legislation may warrant exception to the guidelines published in the Fitch report: "*Country-Specific Treatment of Recoveries*", dated 12 December 2005.

The adjustment for recoveries given default will be a function of:

- the covered bonds' default timing;
- the cover pool's stressed cash flows;
- the discount factors;
- the exposure of the covered bond investors at default.

Covered Bonds' Default Timing

The remaining cash flows from the cover pool will be discounted starting from the moment when the cover pool's balance becomes permanently lower than the outstanding volume of covered bonds. In Fitch's view, a sensible administrator would, at this point, stop trying to meet timely payments on the

covered bonds and would initiate liquidation procedures. Many covered bond regimes as well as contractual covered bonds have explicit provisions to that effect.

If the covered bonds do not default under stresses corresponding to the highest applicable rating scenario (after giving consideration for the maximum number of upward notchings), the maximum number of upward notches allowed under the Recovery Rating methodology will be granted, subject, of course, to a 'AAA' cap.

The Cover Pool's Stressed Cash Flows

Net proceeds achievable from a pool's liquidation may be strongly affected by the type and liquidity of the assets in the portfolio. In addition, any third-party valuation of the collateral would factor in assumptions about expected deterioration in the pool's credit quality.

The agency accounts for these adverse elements by deducting the credit losses assumed under the relevant rating scenario from the pool's scheduled cash flows and by incorporating the worst-case effects of all related interest rate and foreign exchange fluctuations in its calculations. The stresses start to be applied at the assumed date of default of the issuer rather than the covered bonds.

Discount Factors

The set of discount factors applied by Fitch when determining the pool's net present value will be based on the forward term structure implied by the agency's structured finance interest rate stresses. The methodology calculates the expected interest rate paths at the time of the covered bonds' default, starting from the then-current stressed index level and assuming that rates will revert to average values in the long term. Should high interest rates be the most stressful scenario for a cover pool with a particular profile versus its related covered bonds, Fitch's calculation will not be based on a curve stabilised at its stressed peak, but will instead give credit to the amount of stresses already experienced by the relevant index.

In doing this, the agency acknowledges that investors are likely to base their views about future interest rates, among others, on the magnitude and direction of the rate shifts observed in the months preceding the default of the covered bonds.

The methodology, based on forward-looking market data and swaption pricing, makes it possible to reflect market expectations about interest rate volatility in one or the other direction. Fitch will periodically update the relevant forward term structures based on the input of its Quantitative Financial Research group.

In addition to a stressed index, the discount rate applied by the agency will incorporate a margin representing the profit any buyer will expect to make on its investment.

Exposure of Covered Bond Investors at Default

Fitch will compare the stressed recoveries from the cover pool in the event of a default under the covered bonds to the outstanding nominal balance of the covered bonds at default.

A worked example of stressed recovery calculation is provided in Appendix 2.

■ Conclusion

The discontinuity factor developed by Fitch will enable covered bond credit analysts to describe more precisely the relationship between the IDR and the rating on the covered bonds. Depending on the framework governing the issuance of covered bonds, but also depending on individual characteristics of the issuer and its cover pool, a downgrade of the issuer will, eventually, result in a downgrade of its outstanding covered bonds, irrespective of the level of overcollateralisation provided to investors. By simple reverse engineering, speculative-grade issuers with a discontinuity factor worse than 7% will not be able to achieve a 'AAA' rating on their covered bonds, even considering the most favourable benefit for recoveries in the event of a default.

Preliminary scoring of the continuity risk embedded in the covered bonds rated by Fitch indicates that:

- contractual covered bonds fare the best in terms of the discontinuity factor; nonetheless, none of them reach absolute continuity, mainly because of a lower involvement of regulators in their respective countries.
- most legislation-based Western European covered bonds obtain discontinuity factors in the range of 5%-20%, with the exception of the Spanish issuers, which would fall in the 40%-50% band.
- in general, public sector covered bonds rank safer than their mortgage counterparts in terms of continuity risk, owing to the relative liquidity of this asset class and the simplicity of its management – especially if the cover pool is composed of bonds rather than loans.

With the exception of those already rated 'AAA' on a PD basis, all covered bonds should benefit from the credit given to recoveries in the event of a default.

Indeed, Fitch foresees that most covered bonds would be capable of reaching recoveries in the 50% to 100% range.

Once finalised and following a satisfactory conclusion of the consultation period, the new criteria will gradually be implemented over the course of the next 12 months, starting with the covered bonds issued by the lowest-rated financial institutions. New covered bonds subsequently rated by Fitch will be subject to this rating approach from the date of the initial rating assignment.

Fitch intends to publish the discontinuity factor for each of the covered bonds rated by Fitch. The IDR of the issuer, although needed to determine the PD of the covered bonds, may remain unpublished. In addition to the rating on the covered bonds, Fitch will communicate in its press releases and reports the rating achieved by the covered bonds on the basis of their probability of default. The agency will also be publishing the assigned Recovery Ratings, for covered bonds issued by banks rated 'B+' or below. Finally, Fitch will publicly disclose, for each rated covered bond, the assumptions on the level of overcollateralisation applied in its analysis.

Appendix 1: Continuity Scoring

Asset Segregation (50% Weight) System-Specific Drivers

- Effective segregation of the cover assets from the claims of other creditors of the issuer.
- Immunity of excess overcollateralisation against the claims of other creditors of the issuer.
- Bankruptcy-remoteness of the collateral posted by privileged swap counterparties.
- Provisions against the risk that the pool's cash flows could be commingled with other revenues of the insolvent issuer and might not reach covered bond investors.
- Protection against borrowers' attempts to set off their debt against any receivable they have against the issuer.

Alternative Management (15% Weight)

System-Specific Drivers

- Appointment of an administrator to take exclusive care of the interests of covered bondholders.
- Likelihood that the substitute manager will step in a sufficient time before an insolvency of the issuer.
- Importance of the timeliness of payments in the relevant legal provisions.
- Ability of the substitute manager to sell cover assets or to borrow in order to make timely payment on the covered bonds.

Cover Pool-Specific Drivers

- Clear identification of cover assets and privileged swaps within the issuing bank's IT systems.
- Ability of the issuing bank's IT systems to identify debtors' accounts.
- Use of standardised rather than custom-made IT systems.
- Degree of automation and rapidity of delivery of cover pool reporting to the rating agency.
- Adequacy of the filing of loan documentation, certificate of ownership and, if applicable, evidence of security.
- Experience and qualifications of the staff dealing with the cover assets and in charge of asset and liability management.

Liquidity Gaps (30% Weight)

System-Specific Drivers

- Existence of a balance principle or provision for the pass-through amortisation of covered bonds after an insolvency of the issuer.
- Potential acceleration of the covered bonds; in case of an acceleration, feasibility of timely payment on the covered bonds between the insolvency of the issuer and the liquidation of the cover pool.
- Availability of a pre-maturity test, accumulation or extension periods on the covered bonds or any other provision giving the manager sufficient time to raise liquidity to pay maturing bullets.
- Existence and liquidity of a secondary market for the type of assets contained in the cover pool.

Cover Pool-Specific Drivers

- Availability of liquid assets within the pool and likelihood that the same proportion will be maintained in the future.
- Capacity of the liquid assets in the pool to cover payments due on the covered bonds for a period sufficient to allow the pool manager to initiate the sale process for all other assets.
- Proportion of bonds versus loans within the cover pool (for public sector covered bonds).
- Capacity of the cash flows arising as a result of the pool's natural amortisation to cover payments due on the covered bonds.

Covered Bonds Oversight (5% Weight)

System-Specific Drivers

- Monitoring of covered bond issuers (reporting requirements, regulatory stresses, audit) by the regulator.
- Incidence of covered bonds in the overall funding of domestic banks.
- Historical track record of the instrument in the relevant jurisdiction.
- Precedent of regulators taking an active role in ensuring the timeliness of payments following the insolvency of a covered bond issuer.

Appendix 2 – Worked Example

Covered Bond Issuer: Sample Bank
Issuer Default Rating (IDR): 'A/F1'
Cover Pool Balance: EUR30bn
Covered Bonds Balance: EUR25bn
Available Overcollateralisation: (30-25)/25=20%

Step 1 – Scoring Continuity Risk

Discontinuity Factor Drivers

Component	Weighting (%)
Assets Segregation	50
Alternative Management	15
Liquidity Gaps	30
Covered Bonds Oversight	5
Total	**100**

Source: Fitch

Calculated Discontinuity Factor= 40%

Step 2 – Derive the Covered Bonds' Lowest Achievable PD

Issuer's idealised five-year Cumulative PD = 0.561%
Covered Bonds' Lowest Achievable PD = 0.561% * 40% = 0.2244%

Fitch Idealised Five-Year Cumulative PD

Rating	Cumulative PD (%)
AAA	0.030
AA+	0.094
AA	0.203
AA-	0.255
A+	0.501
A	0.561

Source: Fitch

Covered Bonds' Maximum Achievable Rating on a PD Basis = 'AA'

Step 3 – Run the Cash Flow Model to Determine the Covered Bonds' PD

Fitch's covered bond cash flow model is first run in the stress scenario corresponding to the maximum rating achievable by the covered bonds on a PD basis ('AA'). If the model passes, the covered bonds' PD will be set at this level. Otherwise, simulations will be reiterated at lower rating levels until the model passes. The bank's IDR will act as a floor for the rating of the covered bonds on a PD basis.
The calculation is run on the basis of the contractual, committed or publicly stated minimum overcollateralisation, failing which Fitch will apply the lowest level reported in the preceding 12 months if the issuer is rated at least 'F2', or else the minimum mandatory threshold.

For the purposes of this example, the agency assumes that credit is given to overcollateralisation of 20%, and that the covered bonds' cash flow model passes at 'AA'.

Step 4 – Adjust for Recoveries

Recoveries from the pool are calculated by discounting the stressed expected cash flow in a scenario corresponding to the covered bonds' achievable rating after considering the effect of recoveries, i.e. here in a 'AAA' scenario.

Calculation of Expected Recoveries from the Cover Pool

Year (After Covered Bonds' Default)	Gross Expected Cash Flows (EURm)	Stressed Expected Cash Flows (EURm) at AAA	Discount Factor	NPV (EURm)
1	10,700	10,550	96.57	10,188.31
2	6,900	6,650	94.37	6,275.61
3	4,000	3,900	92.38	3,602.82
4	2,200	2,000	90.57	1,811.40
5	1,050	1,000	87.93	879.30
Total	**24,850**	**24,100**		**22,757.26**

Source: Fitch

Expected Recoveries	∑ Stressed Expected Cash Flow*Discount Factor = EUR22.757bn
OutstandingCovered Bonds	EUR25bn
Recovery Percentage	22.757/25 = 91.03%

Fitch Recovery Scale

Recovery Rating	Recovery Prospects	Recovery Bands Given Default (%)	Maximum Notching IG	Maximum Notching Non-IG
RR1	Outstanding	91-100	+2	+3
RR2	Superior	71-90	+1	+2
RR3	Good	51-70	+1	+1
RR4	Average	31-50	-	-
RR5	Below Average	11-30	-1	-1
RR6	Poor	0-10	-1/-2	-2/-3

Source: Fitch

Rating assigned to the Covered Bonds

Covered Bonds' Maximum Achievable Default Rating	**'**AA'
Adjustment for Recoveries	+ 2 notches
Covered Bonds' Rating	**'AAA'**