

Global Consumer ABS Rating Criteria

Effective from 17 May 2017 to 11 December 2017

Sector-Specific Criteria Report

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This report replaces the previous report with the same title, dated 1 December 2016, and includes the approach to analysing Italian salary-assignment loan ABS in *Appendix 6*.

Analysts

Andy Brewer
+44 20 3530 1005
andy.brewer@fitchratings.com

Daniele Visentin, CFA
+44 20 3530 1371
daniele.visentin@fitchratings.com

James Leung
+61 2 8256 0322
james.leung@fitchratings.com

Tracy Wan, CFA
+1 212 908 9171
tracy.wan@fitchratings.com

Juan Pablo Gil
+1 312 606 2301
juanpablo.gil@fitchratings.com

Contacts

EMEA
Markus Papenroth, CFA
+44 20 3530 1707
markus.papenroth@fitchratings.com

APAC
Ben McCarthy
+61 2 8256 0388
ben.mccarthy@fitchratings.com

US
Andreas Wilgen
+1 212 908 0778
andreas.wilgen@fitchratings.com

Latin America
Gregory Kabance
+1 312 368 2052
gregory.kabance@fitchratings.com

Scope

This criteria report outlines Fitch Ratings' global methodology for analysing and monitoring credit risk inherent in asset-backed securities (ABS) backed by consumer receivables. The portfolios consist of homogenous, amortising loan or lease products advanced to a diversified pool of individuals. This includes portfolios of payroll-deductible loans, handset receivables, granular mixed leasing portfolios and in APAC, Latin America and EMEA, portfolios of auto loans or leases. The criteria may also be applicable to similar portfolios with SME obligors (see *Appendix 1*), but not to credit card ABS, US auto loan and lease ABS, and student loan ABS.

The analysis assumes a 'clean' portfolio at closing. If delinquent assets are included, Fitch will adjust its assumptions to consider the additional credit risk from delinquent borrowers, subject to this being a small portion of the pool. Otherwise, our *Non-Performing Loan Securitisations Rating Criteria* may apply.

If the analysed portfolio presents features or risks that are not addressed by this criteria report, Fitch may assess such risks through alternative criteria, which will be disclosed in the transaction report. For example, for a transaction exposed to obligor concentration, Fitch may follow the same principles as for SME receivables, which are outlined in the *SME Balance-Sheet Securitisation Rating Criteria*.

Key Rating Drivers

Obligor Default Risk: Obligor default and recovery rates are a key assumption in our quantitative analysis. We derive portfolio-specific default and recovery base case expectations based primarily on originator-specific data, but also taking into account economic outlook and market and peer comparison data. The stressed default and recovery assumptions are the key drivers when evaluating credit enhancement. Asset performance risks may be higher for transactions with revolving periods, as the characteristics of individual loans or leases may change.

Cash Flow Dynamics: The timing of cash flows, asset yield, note interest costs and other expenses can make either a net positive or negative contribution to a transaction.

Structural Risks: Securitisation structures are intended to delink the performance of issued notes from the credit quality of the originator. This is typically achieved by a "true sale" transfer of the assets from the originator to a bankruptcy-remote SPV. Analysis of structural risks is a key part of Fitch's rating review, underpinning the quantitative analysis.

Counterparty Risks: In collecting receivables and distributing funds, the issuer relies on counterparty relationships, especially with the servicer, account bank and hedge counterparties. Securitisation structures generally seek to minimise counterparty risk through diversification and replacement procedures; yet, a degree of counterparty dependency often remains.

Servicer, Operational Risks: Fitch conducts an originator/servicer review to understand the policies, processes and practices in place; this may result in quantitative adjustments to its asset assumptions. Servicer continuity and the availability of liquidity and/or back-up servicing arrangements are also analysed.

Residual Value Risks: Certain auto loan and lease transactions are directly exposed to the risk of declining used-car values, as obligors can return the vehicle in lieu of final payments. In such transactions, the impact of residual value risk often outweighs obligor default risk.

Data and Assumptions

Portfolio Composition

Fitch assumes that consumer ABS portfolios: (i) comprise a large number of relatively small balance obligations; (ii) have products with relatively homogenous characteristics; and (iii) contain a diverse range of obligors. Fitch will validate the applicability of such assumptions prior to applying these criteria.

The same characteristics may also be present in portfolios of small corporate obligors. *Appendix 1* provides guidelines that Fitch will apply to determine the applicability of this criteria report to receivables pools of small corporate obligors.

Data Availability

A summary data list for both the initial rating and the transaction surveillance is presented in *Appendix 2*, which outlines the key data that Fitch would expect to be provided with by the originator or servicer in order to be able to apply the initial analysis and ongoing monitoring outlined in this criteria report.

The historical data for the initial rating is expected to cover:

- a minimum of five years, typically covering all phases of at least one economic cycle; and
- the usual lifetime (origination to maturity) of the securitised products.

Fitch may consider available historical data sufficient, even if it does not fully cover the lifetime of the majority of eligible assets; this will attract higher stressed assumptions, all other things being equal. If the available historical data is deemed to be insufficient, Fitch may decline to rate the transaction. If the historical data do not fulfil the minimum criteria above, but sufficient relevant and comparable market information is available to derive proxy assumptions, Fitch may elect to proceed with the rating, but may impose a rating cap. The historical data may be insufficient for a number of reasons including the following: limited period of available data; limited relevance of available data; or high levels of volatility in the available data.

For more detail please refer to *Global Structured Finance Rating Criteria*, available at www.fitchratings.com.

Data Sources

Fitch has developed these criteria based on data received while analysing and rating transactions in this asset class. The sources and types of data used in developing criteria are by and large the same as that received in a transaction's rating process (see *Appendix 2*). In general, the primary source of data is the originator, which provides the following:

- pool data (stratifications or loan level);
- historical performance data; and
- historical portfolio stratifications or time series of key parameters (eg original term of the assets).

Fitch's analysis will also be supplemented by market data provided by third parties, either directly to the agency or via the originator, which may be the following data types:

- historical performance data of peer transactions (including Fitch index reports);
- historical performance data of peer originators;
- national statistics or central bank data on consumer loan balances and performance (where available);

Related Criteria

[Global Structured Finance Rating Criteria \(May 2017\)](#)

[Global Consumer ABS Rating Criteria – EMEA and APAC Auto Residual Value Addendum \(May 2017\)](#)

[Structured Finance and Covered Bonds Interest Rate Stresses Rating Criteria \(February 2017\)](#)

[Structured Finance and Covered Bonds Counterparty Rating Criteria \(May 2017\)](#)

[Structured Finance and Covered Bonds Counterparty Rating Criteria: Derivative Addendum \(May 2017\)](#)

[SME Balance-Sheet Securitisation Rating Criteria \(March 2017\)](#)

[Criteria for Country Risk in Global Structured Finance and Covered Bonds \(September 2016\)](#)

[Non-Performing Loan Securitisations Rating Criteria \(March 2017\)](#)

- macroeconomic data on relevant drivers of default performance including unemployment and interest rates; and
- data on relevant drivers of recovery performance including used-car price data.

Historical performance data should show the performance of the obligors in relation to the original contractual payment terms.

To continue to rate a transaction, Fitch must receive sufficient information, although this may be less detailed than that is available for new transaction ratings before closing. Fitch's primary source of information for transaction monitoring is the monthly or quarterly investor or servicer report and increasingly in EMEA and Australia, loan-by-loan data.

Data Quality

The rating approach outlined in this criteria report use historical performance data to form an expectation of future performance.

Fitch expects historical performance data to show the performance of the obligors in relation to the original contractual payment terms. Servicer/originator practices such as loan modifications or loan refinancing (outside the securitisation transaction) may lead to historical delinquency and default levels being understated. In such cases, Fitch expects to be provided with additional data so that the impact of any such servicer/originator practices can be isolated and excluded.

Historical data analysis may present limitations due to factors including: (i) limited data availability, due to the duration of the data series and/or the data series being derived exclusively from a benign economic period; and/or (ii) a lack of granularity within the underlying pool; and/or (iii) a change in the origination practices such that the historical data is not reflective of the securitised assets (eg caused by a change in scoring models, target business, or changes in general loan/lease characteristics such as term, LTV and down payment, or balloon size). In such cases, Fitch will determine whether to apply this criteria report or to use an alternative rating approach. Any data limitations, rating caps, data adjustments or assumptions applied by the agency will be highlighted in its transaction rating reports.

The initial assessment of portfolio data is supported by an agreed-upon-procedures (AUP) report, where available. AUP reports are prepared by auditing firms typically selected by the arranger or originator, to assess the error rate in loan-by-loan collateral data compared to the information in the originator's source documents. An AUP may not be available in every jurisdiction and may not be applicable for receivables that were originated entirely online and for which no source documents may exist.

At the time of the initial analysis the agency may also review a small sample of origination files to assess whether the information contained in the reviewed files is consistent with the originator's underwriting policies and practices and the other information provided to the agency about the asset portfolio.

In the ongoing surveillance of transactions Fitch will not receive AUP reports nor will it conduct reviews of originator files, unless the transaction is undergoing new issuance or restructuring. In EMEA, file reviews will be conducted as part of any updated originator and servicer review for transactions in their revolving period, unless the same limitations as for AUP reports apply.

Monitoring of Portfolio Data

If data from multiple sources complement the regularly updated investor or servicer reports, Fitch will seek to identify any discrepancies between them. The analysis will also include a comparison of period-to-period trends to identify missing information or unusual movements that might reflect a data error, and a comparison with cohort averages to identify unusual figures that might reflect a reporting error.

Information should include the receivable balance, split of receivables by sub-products, delinquency status of the receivables, amount of interest and principal collections, prepayments, default and recovery rates. To the extent that the reported asset performance is impacted by any form of originator support, including (i) loan modifications, (ii) loan refinancing, or (iii) the repurchase of assets, then the scale and impact of the support should be clearly reported. The servicer report can be supplemented with additional data provided by the originator or servicer. Fitch will identify and seek to resolve any data issues before proceeding with the analysis of that transaction. If data critical to the analysis is unavailable or not reliable, or Fitch determines it to be insufficient, the agency may withdraw the related ratings.

The surveillance of a revolving transaction requires more in-depth information regarding changes in portfolio composition and relative collateral performance, compared with assumptions made to rate the transaction at inception. This is due to the replenishment feature – whereby new assets are added to the portfolio – and the absence of any deleveraging, meaning that the structure does not build up any additional credit enhancement during the revolving period. Other factors, such as originator repurchases of delinquent collateral, are also important in assessing the effectiveness of triggers in controlling revolving period risk.

Furthermore, revolving transactions are exposed to the risk of changes in origination standards during the revolving period. If performance deterioration is reported or reasonably foreseeable, Fitch will ask for updates to information regarding origination procedures and controls, and product profiles and limits. In addition, the agency expects originators and servicers to provide it with prompt notification of any material changes to their origination, underwriting or servicing processes or product profiles.

Asset Analysis

Fitch reviews the underlying asset quality of proposed transactions that are presented to it by originators and their arrangers. The agency identifies risks under different rating scenarios and forms an opinion on the ability of given structures to mitigate such risks. It will publish its assumptions in the associated transaction report.

Products and Sub-Products

Within a receivable pool, different sub-products can exhibit very different performance characteristics. Examples of product distinctions include: (i) originator's own product distinctions; (ii) obligor type; (iii) origination channels; (iv) underwriting process; (v) loan/lease purpose; (vi) underlying asset type; or (vii) deposits or loan-to-value ratios (LTVs) for auto loans. Distinctions can be made using a number of different categorisations. However, the purpose is to establish sub-products that are homogenous with respect to expected performance.

Fitch will review the terms and characteristics of the products that will be included within the securitisation transaction, in particular, tenors, interest rates, LTV limits (if applicable) and restrictions on loan purpose. Fitch may subdivide the securitised pool into sub-products for the purpose of its asset analysis (see the *Default Risk* and *Recoveries* sections).

If there are several distinct sub-products within a portfolio with a significant weight, Fitch may carry out a separate asset analysis for each sub-product. In that case, the base case and stressed assumptions used in the rating analysis will be the weighted average of the aggregate according to the collateral weight for each sub-pool.

When a transaction is revolving and transaction documents stipulate the maximum product ratios, Fitch will assume that within these concentration limits the portfolio migrates to a stressed case during the revolving period. The two main risks in this case are the increased risk horizon and a shift to weaker collateral, as the original pool is replaced. Fitch will include its assumptions on the stressed portfolio mix in its transaction-specific rating reports.

Different sub-products can exhibit very different performance characteristics. The purpose of the pool segregation is to establish sub-products that are homogenous with respect to expected performance.

Eligibility and Portfolio Criteria

Eligibility and portfolio criteria help to mitigate risk related to the type and quality of assets included within the pool. Typical loan-level eligibility criteria include:

- originated in line with the originator's underwriting guidelines;
- compliant with and enforceable under applicable consumer finance legislation;
- no more than 30-day delinquent or written-off/charged-off contracts;
- maximum loan/lease tenor;
- minimum interest rate or spread for each loan/lease in the pool;
- maximum original and remaining term for every contract;
- maximum balloon payment as a percentage of the financed amount; and
- no employees of the originator.

Typical pool-level concentration limits, which are especially relevant for revolving transactions, include:

- maximum single obligor concentration;
- maximum percentage of different loan products;
- geographical concentrations;
- maximum residual value (RV) or balloon per contract, by portfolio or sub-pool;
- minimum weighted-average interest rate;
- RV/balloon cap for the portfolio or sub-pool;
- maximum single employer (retention agent) concentration (for payroll deductible loans, if applicable – see Appendix 6);
- maximum LTV and/or minimum down payment in case of auto loan transactions; and
- distribution of credit scores.

Fitch will assess the rating impact of eligibility criteria on a transaction-by-transaction basis, by identifying any risks and considering available mitigants.

Transaction documentation usually obliges originators to repurchase any assets sold to the issuer which were not eligible at the time of sale. Fitch assumes that originators will comply with the eligibility criteria when selecting the pool and will comply with their contractual obligations to repurchase if the eligibility criteria are breached for any reason. The credit analysis therefore does not address the risk of ineligible assets being sold into the pool.

Default Risk

The transaction documents define the point at which receivables will be classified as defaulted. Typically, this will be upon the earlier of a certain period of delinquency (eg 90 days) or the occurrence of another event/circumstance that causes the servicer to classify the receivable as uncollectible (eg debtor insolvency). As a result of a receivable being classified as defaulted, the principal balance of the receivable (from the perspective of the securitisation transaction) will be reduced to zero.

Generally, Fitch's analysis will follow the transaction default definition and therefore historical data is expected to be provided on the same basis. A later default definition will typically result in a lower default rate and a lower recovery rate – the extent of which will depend upon the cure rate achieved between different stages of delinquency and how it is reflected in the recovery rate data. The ultimate loss expectation, however, is the same irrespective of the default definition applied. Fitch does not typically expect the transaction default definition to exceed 120 to 180 days for consumer loan portfolios.

In addition to the above, Fitch requests default data to be provided on the basis of a 90 day delinquent definition in order to compare transactions on a like-for-like basis between different originators and different jurisdictions. In order to mitigate the risk that an unusually late default definition or high cure rate on a particular transaction could distort Fitch’s quantitative analysis, Fitch may base its analysis of that transaction on an earlier default definition.

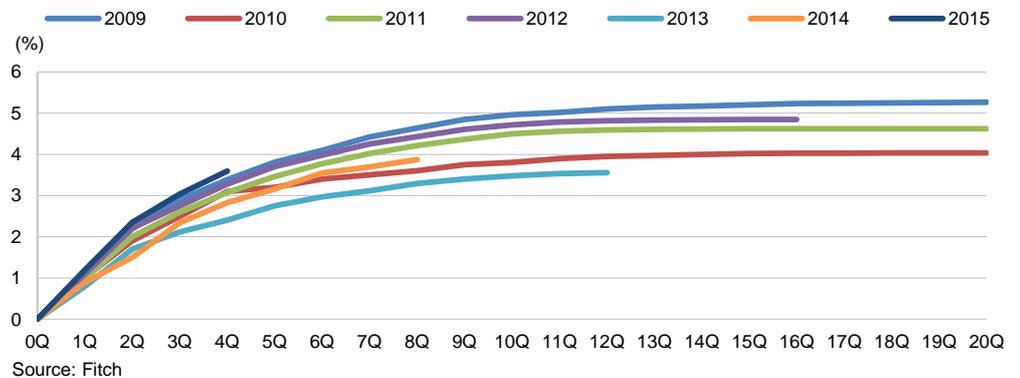
Where a transaction does not follow a definition of “default” that is fixed in terms of days delinquent, Fitch will base its analysis on an estimated default timing, derived by reviewing historical default timing. Where the agency has concerns that the servicer may amend the definition of “default” timing – if this is permitted under the transaction documents or inherent in the servicing standards – rating caps may apply or Fitch may not assign ratings to the transaction.

On occasion, the analysed portfolio may present risks that are not assessed by this criteria report. In such cases Fitch may follow alternative criteria, which will be disclosed in the relevant transaction reports. For example, a portfolio may be exposed to obligor concentration, which is not a risk contemplated in this criteria report, which assumes a granular portfolio. Fitch may as a result analyse a specific aspect (eg default risk) under the *SME Balance-Sheet Securitisation Rating Criteria*, while other aspects (eg recovery expectations) are reviewed under this criteria report.

Default Base Case Assumptions

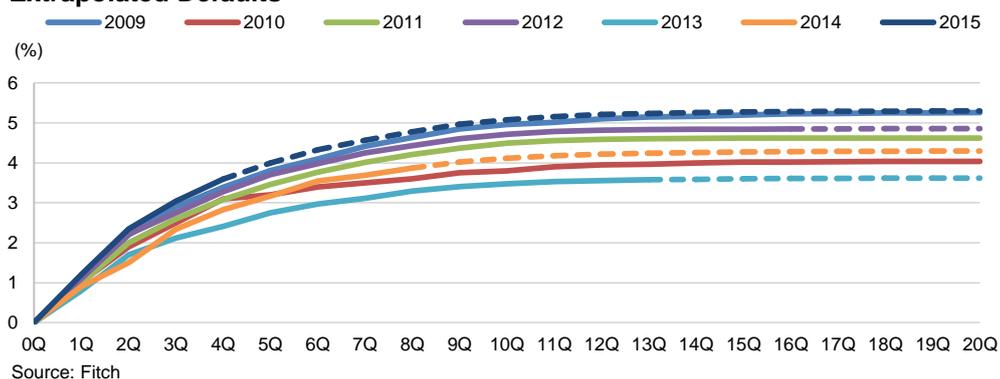
The default base case is defined as the value of receivables that Fitch expects to be classified as defaulted and is expressed as a percentage of the aggregate initial loan amount during the life of the loans. The base case is Fitch’s best prediction of the lifetime default behaviour of the underlying assets and is not meant to include a buffer against any unexpected economic deterioration. The base case is derived from a combination of quantitative and qualitative considerations.

Unextrapolated Defaults



To derive the default base case, Fitch starts with the historical performance of a corresponding asset from the same originator and of the same quality and composition as the pool to be securitised. Base cases are determined for each individual product type. The base case is always set to cover the maximum original tenor of the receivables. The available data is expected to cover the majority of the original term of the assets, so that the default curves reach a point of flattening.

Extrapolated Defaults



A static pool is a group of assets generated during a specific calendar period, typically a month, quarter or year (referred to as the “vintage” of the data). In the two charts above, data is presented with respect to year of origination, showing default performance with respect to quarters since origination (X axis).

Extrapolation can be used to project forward the performance of younger vintages (as shown in the chart immediately above). Whether the display of extrapolated vintages is required is at the discretion of a rating committee. A discussion of the limitations of extrapolation, and a simplified example, are outlined in more detail in *Appendix 4*.

Fitch will then take into account the following qualitative considerations to adjust any quantitatively derived result when forming a base-case assumption:

- If historical data is volatile or shows a certain trend, Fitch’s analysis will focus on the drivers of these patterns and their impact on the pool performance.
- The agency will also look into historical originator or transaction dynamic delinquency data, as this can provide insight into near-term default performance, changes in underwriting standards and the exposure to the economic cycle. Increasing delinquency levels indicate the likelihood of increased defaults.
- Fitch will use originator-specific data as the primary means of deriving base-case assumptions, due to the impact of originator-specific factors on default performance. However, the agency will benchmark default data and base-case assumptions between different originators for similar asset types. It will also cross-reference the portfolio characteristics of the securitised pool with those of the originator’s total book to establish how relevant the provided historical data are for determining the base case.
- For balloon loans, Fitch will determine if the historic performance data fully capture the stress that borrowers may experience when making a large balloon payment. As this is often not the case – for example because the historical data do not cover the full term or only cover a benign period with easy re-financing options – Fitch is likely to apply higher default probabilities or higher stresses, or in extreme cases cap the rating or decline to rate the transaction.
- Input from the relevant Fitch Sovereigns analyst will provide the economic context for the historical data to determine how much economic stress is included within the historical default data that is presented for a particular transaction. This is combined with Fitch’s macroeconomic outlook for the relevant jurisdiction to form forward looking base-case assumptions. For transactions with longer revolving periods, Fitch’s expectations will be less influenced by the near-term economic outlook.

Fitch considers origination quality and unemployment (taking into account the overall level, trend and, where available, the redundancy rate) to be key drivers of consumer ABS asset performance. Historical vintage data, spanning a period of increasing unemployment, will

Fitch considers origination quality and unemployment to be key drivers of consumer ABS asset performance.

generally be considered to include a degree of economic stress (whereas the opposite conclusion would apply to data derived from a period of stable or decreasing unemployment). Fitch will compare the range of unemployment levels and the extent of any increase in the period corresponding to the historical performance data to its unemployment expectations for the relevant jurisdiction over the term of the transaction. This analysis, along with data from other similar transactions, will contribute to Fitch’s overall outlook for the asset class and will be incorporated into Fitch’s base case expectations.

The base-case assumption determined during the rating analysis will incorporate the impact of Fitch’s country and asset class outlook upon the historical performance data, as well as originator-specific factors derived from the originator review.

Fitch has seen historical default data that quantitatively could support extremely low base cases. Since even very small nominal deviations from historical values would represent potentially substantial relative shifts, Fitch typically floors base case lifetime (or in case of surveillance analyses, remaining) default rates at 1%. The limit applies to the individual sub-pools of the securitised portfolio.

Default Rating Stresses

Fitch’s rating analysis uses stress multiples to establish a degree of remoteness from the base-case assumption that is appropriate for the assigned rating level. It addresses the risk that actual default performance may be worse than the base-case assumption. The stressed assumptions are intended to provide a basis to account for the impact of economic deterioration on the transaction’s cash flows.

Default stress multiples will be determined by Fitch on a transaction-specific basis, in conjunction with the base case assumption, and with consideration for qualitative factors.

The following multiples are applied to the base-case default expectation to arrive at the rating default rate (RDR) for a given rating scenario. The RDR will be an input to Fitch’s cash flow model. The stresses below are applied at the time of the initial rating and during the replenishment period for revolving transactions. In most transactions applied stresses will fall within the range outlined in the following table; when Fitch applies multiples outside these ranges this will be disclosed in the transaction-specific rating reports.

Default Stress Multiples

Rating level	Lower (x)	Median (x)	Higher (x)
AAAsf	4.0	5.0	6.0
AAsf	3.2	4.0	4.8
Asf	2.4	3.0	3.6
BBBsf	1.8	2.2	2.6
BBsf	1.3	1.5	1.8
Bsf	1.1	1.2	1.3

Notch-specific default rate stresses are derived by linear interpolation between the stresses applicable to adjacent rating categories^a

^a As there are usually two notches between rating categories, the steps between notches are one-third of the difference between the categories. The same applies for the ‘AA+sf’ level: it would be a third of the difference between ‘AAsf’ and ‘AAAsf’. This assumes an implicit minus modifier for ‘AAAsf’ and implies a stronger more remote scenario for the highest rating

In most transactions, stresses will fall within the range outlined above; exceptions apply, as described below
Source: Fitch

Fitch generally expects RDRs for high rating scenarios to be stable over time (for a given portfolio), whereas for lower rating levels the RDRs may be more responsive to the prevailing base-case default rate. As a result, within the above ranges the actual multiple will be determined by Fitch on a transaction-specific basis, in conjunction with the base-case assumption, and with consideration given to qualitative factors including the following:

- Expected performance (base case) relative to economic cycle: as stresses are intended to provide protection against economic deterioration. Fitch considers it appropriate to apply a multiple above the median if the base case does not incorporate an element of economic stress. If, for example, the base case, defined to cover the default performance expectation

for the term of the transaction, is based on a stable or positive economic outlook, a higher multiple will be applied. The opposite scenario, where the base case includes an element of economic stress (eg, expectation of increased unemployment), would lead to a lower multiple. This consideration is typically the most important in view of Fitch's expectation of stable RDRs in high rating scenarios over time.

- Quantity and volatility of historical data: limited data history and volatile performance would give rise to concerns regarding the consistency of the origination and collection processes. Fitch may diagnose data limitations even if the time period covered is substantial, but asset origination was subject to major changes. Portfolios with volatile performance history are also likely to be more volatile in the event of economic stress and therefore a higher multiple would be applied. The opposite scenario, where historical data is consistent, especially if it includes a period of economic stress, would lead to a lower multiple. However, it should be noted that a higher stress cannot mitigate the provision of insufficient data; the provision of insufficient data would result in a rating cap or may prevent Fitch from assigning a rating at any level.
- Default definition: an earlier default definition would typically result in higher base-case default and recovery rate assumptions. However the base-case loss expectation (defaults less recoveries) would not be affected by the choice of default definition. In order to avoid the choice of default definition having an undue impact on Fitch's stressed default, recovery and loss expectations, the agency will adjust rating stresses. As a result, all else being equal, transactions with an early default definition will be subject to a lower default multiple than transactions with a late default definition.
- Stability of origination volumes: historical data derived from periods of unstable, especially growing, origination volumes is typically less predictive than data derived from a period of stable origination volumes. This is because the same factors that support increased origination volumes may also negatively impact future performance (eg broader distribution and lower acceptance standards). Base-case expectations derived from unstable origination volumes would lead to a higher multiple, whereas data derived from stable origination volumes would lead to a lower multiple. However, it should be noted that a higher stress cannot mitigate the absence of data based on a representative level of origination volumes.
- Stability of collateral characteristics: changes over time to collateral characteristics, within the historical performance (eg longer original terms), should be addressed in the base-case assumptions. However, smaller changes may be addressed by the choice of default multiple.
- Obligor diversity: within consumer ABS transactions, a high level of diversity is expected. Certain concentrations, for example regional, may make the portfolio more exposed in the event of an economic stress. Increased stress multiples may address the risk for certain portfolios, while in other cases Fitch will utilise criteria that explicitly address concentration risk (see *Appendix 1*).
- Balloon risk: if the historical data only cover a benign period with easy re-financing options, they do not fully capture the risk that exists in a stressed economic environment when borrowers are faced with making large balloon payments. Therefore Fitch may apply a higher stress multiple for sub-products that are subject to balloon risk.
- Revolving period: revolving periods expose the transaction to the risk of changes in origination standards and also the risk of an economic downturn during the longer transaction horizon. While some of these risks are addressed by replenishment criteria and early amortisation triggers, revolving periods can contribute to increased credit risk.
- Absolute level of base case: where base cases are low in absolute terms (for example at or close to the typical minimum level of 1%), Fitch will tend to use higher multiples to address the risk that a small change in absolute terms can lead to a large change in relative terms. On the other hand, when base cases are set at high absolute levels, lower stress multiples may be appropriate.

- Country risk considerations: Fitch will apply higher multiples if assets are located in countries with increased risk of macroeconomic volatility or event risk. This is often the case in emerging markets, but also in other markets subject to a SF rating cap. Please refer to *Criteria for Country Risk in Global Structured Finance and Covered Bonds* for details.
- National Scale considerations: National Scale Ratings located within emerging markets will similarly use higher multiples than the global scale equivalent for a particular National Scale. As an example, if a 'AAA(mex)' rating in Mexico is equivalent to a 'BBB+sf' rating on the international scale, Fitch will apply a higher multiple than the typical 'BBB+sf' range of 1.8-2.6x. Depending on the rating of the country and the expected volatility within this market, these increased levels are similar to the 'AAAsf' range of 4.0-6.0x, and multiples for the other rating scenarios will be adjusted accordingly.

Transactions rated on the National Scale may involve originators or multinational companies rated at or above the highest rating of the transaction. In addition to reducing the probability of servicer substitutions, Fitch may deem an entity rated higher than the transaction rating to be more likely to provide various forms of support, which may result in applying lower default multiples than listed in the *Default Stress Multiple* table above.

The importance of the above factors will vary for different portfolios. The final stresses will be selected on a qualitative basis and the rationale, as well as any additional factors considered relevant for a transaction, will be described in the rating reports.

Many transactions feature both positive and negative aspects from the above, partially offsetting each other. Fitch may still decide to apply multiples outside the listed ranges (and disclose them in the transaction report). An above-the-range multiple will be for the following reasons:

- base cases set at low levels in absolute terms, as a small change in absolute terms will represent a large relative change;
- early amortisation triggers do not, in the agency's view, protect adequately against asset deterioration;
- historical data is only available for very benign economic situations, or not long enough to cover substantially the lifecycle of the receivables;
- balloon risk is significant;
- country risk is present.

An above-the-range multiple for a given modelled sub-portfolio cannot be higher than 8x (or the corresponding levels for lower rating categories) without constituting a criteria variation.

While the above range of stresses provides a tool to reflect the expectation that different portfolios will respond differently to economic deterioration, Fitch highlights that the application of higher stresses does not negate the importance of adequate origination and servicing practices, as well as the availability of sufficient and reliable historical data when setting base-case expectations. In the absence of adequate origination and servicing practices and/or adequate data, Fitch may be unable to derive base-case expectations with a sufficient degree of robustness to apply this rating approach and, in such event a rating cap may be applied to the transaction. The same applies when the other factors listed above are "extreme" – for example when the revolving period of a transaction is very long.

When the base case default assumption is so high (eg 12%) that applying a multiple even at the lower end of the range would imply a level of defaults not conceivable in any scenario, Fitch may apply a below-the-range multiple.

Recoveries

Recovery Base-Case Assumptions

The recovery base-case assumption can be defined as the amount of cash proceeds (expressed as a percentage of the corresponding defaulted amount) which Fitch expects could be realised by the issuer from receivables that become defaulted. Such proceeds can include cash payments from obligors and sale proceeds from secured assets. In the case of recoveries achieved as a result of the cure or re-performance of the defaulted receivable, Fitch considers such amounts on a cash basis, as opposed to a full and immediate recovery.

The base case is derived by performing static data analysis and applying qualitative considerations. Static recovery data is analysed in a similar way to static default data, with the exceptions that static recovery data is analysed with respect to the period of default rather the period of origination, and levels are shown as a percentage of the principal amount defaulted rather than the principal amount originated.

Qualitative considerations, including any legal or operational limitations on the issuer’s recovery capabilities, will be taken into account by Fitch when deriving the base-case recovery assumptions. For example, in the case of receivables whose payments are secured by an asset, if the issuer does not benefit from the same security as the originator, then the base-case recoveries will be reduced, possibly to zero.

This information is used to derive cumulative recovery-rate assumptions and a time vector for recoveries. The agency will also consider other data provided by the originator, or other data available to Fitch, including peer comparison, when deriving recovery assumptions.

For periodic reviews of existing transactions, recoveries from the existing stock of defaulted assets will also be assessed, to the extent where further proceeds can be expected.

Recovery Rating Stresses

Fitch’s rating analysis will include haircuts to incorporate the risk that actual recovery performance may be worse than the base-case assumption. The stressed assumptions are intended to provide a basis to account for the impact of economic deterioration upon the transaction’s cash flows; for secured financing contracts, they also assume the default of the manufacturer of the financed good in the highest rating scenarios. The haircuts in the table below will be applied as a reduction to the base-case recovery assumption in different stress scenarios. The stresses below are applied at the time of the initial rating and during the replenishment period for revolving transactions.

Recovery Stress Haircuts

Rating level	Lower (%)	Median (%)	Higher (%)
AAAsf	40	50	60
AAsf	32	40	48
Asf	24	30	36
BBBsf	18	23	27
BBsf	12	15	18
Bsf	8	10	12

Notch-specific recovery rate stresses are derived by linear interpolation between the stresses applicable to adjacent rating categories. See footnote to *Default Stress Multiple* table for interpolation between ‘AAsf’ and ‘AAAsf’
Source: Fitch

Qualitative considerations, including any legal or operational limitations on the issuer’s recovery capabilities, will be taken into account by Fitch when deriving the base-case recovery assumptions.

Within the above ranges, the actual haircut will be determined by Fitch on a transaction-specific basis, in conjunction with the base-case assumption, and with consideration for qualitative factors including the following:

- Expected (base case) recoveries relative to economic cycle: as stresses are intended to provide protection against economic deterioration, Fitch considers it appropriate to apply a haircut below the median if the base case already factors in an element of economic stress (and vice versa). For example, if an economic downturn is expected in the near term and the base case has been set below the historical average to capture the expected impact, this would justify a lower haircut, relative to a base case that has been set closer to the long-run average performance.
- Quantity and volatility of historical data: recovery history, based on a large sample of defaulted receivables and showing stable performance, would support a haircut below the median (and vice versa).
- Default definition: an earlier default definition would generally result in a higher base-case default and recovery rate assumptions. However, the base-case loss expectation (defaults less recoveries) would not be affected by the choice of default definition. In order to avoid the choice of default definition having an undue impact on Fitch's stressed default, recovery and loss expectations, the agency will adjust rating stresses. As a result, all else being equal, transactions which have an early default definition will be subject to a higher recovery haircut than transactions with a late default definition.
- Stability of collateral characteristics: changes over time to collateral characteristics, within the historical performance (e.g. longer original terms), should be addressed in the base-case assumptions. However, smaller changes may be addressed by the choice of recovery haircut.
- Collateral type (secured versus unsecured): this criteria addresses both secured (e.g. auto loan transactions where the issuer benefits from title to, or some other interest in, the vehicles) and unsecured (e.g. unsecured consumer loan transactions where recoveries are only achieved through recourse to the borrower) consumer ABS transactions. Usually, the historic recovery rates of unsecured portfolios are significantly lower compared to those where the loans/leases are secured by collateral, and therefore lower base cases are assumed. Moreover, Fitch deems that unsecured recoveries would be even more negatively impacted in an economic downturn.
- Recovery processes: the recovery processes and timing will vary depending upon the jurisdiction and the asset class. Often the impact will already be reflected within the base-case assumption derived from the historical data. For example, higher base cases are typically observed for secured asset classes when the relevant legal framework allows a rapid repossession and sale of the collateral security. However, the level of stresses may be varied, within the above ranges, to accommodate such considerations, to the extent that they are expected to be more pronounced in a stress scenario.

In some transactions and/or jurisdictions Fitch may conclude that access to secured recoveries, for example from cars, could be challenging from a legal perspective and not robust in all circumstances. Everything else equal, in such cases Fitch will use higher haircuts than outlined above, or not consider secured recoveries at all in its analysis. This would be outlined in the transaction-specific rating report.

Recovery timing will typically follow that shown by the historical data for the transaction; however, for certain transactions Fitch will apply timing stresses in addition to stressing the level of recoveries. This could be the case, for example, in a situation where Fitch is of the opinion that a replacement servicer could not follow the same recovery processes as the original servicer.

Monitoring Asset Assumptions

After a transaction has closed, more information about the ongoing performance of the underlying receivables and the composition of the outstanding portfolio will become available, but the extensive data submitted for the initial analysis will usually not be updated, or only to a lesser degree of detail. For example, transaction reporting typically does not include performance variables by sub-pools, while Fitch may have assigned separate asset assumptions in its original analysis. However, a full initial-rating data set that becomes available for any subsequent similar new issuances by the same originator would also be considered for the review.

In Fitch's periodical review of existing transactions, the level of base cases and stress assumptions will be re-assessed in accordance with the methodology outlined in this report to reflect Fitch's updated economic expectations, reported performance and current status of the portfolio. The assumptions used in the analysis will reflect the transaction performance, which may result in a revision of previous base case expectations.

To determine whether an asset portfolio follows its expected default trajectory, a comparison of the observed periodic default rate to the projected periodic constant default rate (CDR) calculated at closing may be undertaken. A CDR applied to the weighted-average life (WAL) of the remaining portfolio may also be used to complement the remaining life default expectation.

Transactions with longer default definitions may experience a greater pipeline of delinquent assets, building up to potential default at a later stage and therefore attracting higher analytical adjustments, all else being equal. Adjustments to the remaining default rate will also be driven by the observed delinquencies' trend.

The rating stresses above will also be assessed at each subsequent review to take into account changes in the above factors, e.g., the end of revolving period, obligor concentration, longer data history or changes to the absolute level of the base case.

Structural Risk Analysis – Liability Structure

Fitch reviews the liability structure of transactions that are presented to it by originators and their arrangers. The agency identifies risks under different rating scenarios and forms a view on the ability of given structures to mitigate such risks. The following section outlines standard features of typical consumer ABS transactions; however, it should be noted that Fitch does not recommend or approve any particular structural features.

Credit Enhancement

Fitch will review the credit enhancement structure of each transaction and include it in the agency's cash flow model.

Overcollateralisation and Subordination

Receivables in excess of the amount of any given class of notes (in particular, the amount of notes of senior classes) protect the rated notes against the risk of defaulted receivables.

Cash Reserves

For transactions which use cash reserves, Fitch will analyse the scenarios in which drawings can be made, for example, to cover senior expenses, interest costs and defaulted receivables. In the event that the reserve can be drawn to cover defaulted receivables, then the risk exists that it could be fully drawn and therefore be unavailable for liquidity purposes (unless drawings to cover defaulted receivables are limited by the terms of the transaction documents).

Fitch will analyse the structure with respect to the build-up and amortisation of the cash reserve. These features, as set out in the transaction documentation, will be included in the cash flow modelling. In particular, Fitch will test the impact of a back-loaded default distribution on such a structure and it will consider the adequacy of the floor reserve amounts.

Fitch reviews transaction structures and forms a view on their ability to mitigate the identified risks.

Some transactions may rely exclusively on cash reserves for credit enhancement, although such cases are not common. In these instances, the rating of the ABS notes may be capped at the rating of the transaction's account bank as cash reserves are exposed to counterparty risk to the account bank which holds the reserve.

Excess Spread

Where the portfolio yield exceeds interest costs and expenses, there will be a source of funds to cover defaulted receivables, subject to the transaction structure and priority of payments. The amount of excess spread to cover defaulted receivables will depend on the prepayment, yield and delinquency performance of receivables. This will be included in Fitch's cash flow modelling. Given the high level of portfolio yield that is often found in emerging market transactions (e.g. 40 to 80% in some Latin American transactions) excess spread is a common source of credit enhancement there. Where the reliance of a structure on excess spread as credit enhancement is very high, its susceptibility to adverse scenarios may increase. Fitch's approach to evaluating such structures is described under *Cash Flow Modelling* below.

Interest Rate and Currency Risk

Fitch will identify any underlying interest rate mismatches, and analyse the extent to which these positions are covered via the transaction's hedging or liability structure (see also the *Cash Flow Modelling* and *Counterparty Risk* below for further details).

Fitch will also identify any currency mismatch and analyse the extent to which these positions are covered via the transaction's hedging structure. In the event of a mismatch between the currency of the debtor income and the currency of the loan obligation Fitch will consider the impact of a currency shift upon default risks. If a transaction includes material exposure to unhedged interest rate or currency risk, Fitch may apply a rating cap or decline to rate the transaction. Such examples are usually confined to emerging market jurisdictions (see also the *Cash Flow Modelling* and *Counterparty Risk* for further details).

Priority of Payments

Fitch will review the priority of payments in the transaction documents to identify the relative seniority of each class of notes and the issuer's other obligations. It will replicate the transaction-specific priority of payments within its cash flow model.

Principal Deficiency Ledger

The PDL mechanism is commonly used to account for defaulted principal receivables and to make cash available from interest collections to reimburse such amounts.

Fitch will review the transaction structure to identify how asset defaults are treated. This mechanism will be included in Fitch's cash flow modelling.

Note Amortisation

Notes may be amortised either on a sequential or pro-rata basis. Under sequential amortisation, principal funds are allocated first to repay senior notes in full, before being allocated to repay junior notes. Under pro-rata amortisation, funds are shared in proportion to the respective outstanding principal balances of the notes.

Fitch highlights that pro-rata structures are vulnerable to back-loaded default distributions. This will in turn increase the credit enhancement needed to support the ratings of the notes.

Structures may feature both sequential and pro rata amortisation phases. In such structures, Fitch will analyse the triggers that lead to the transaction switching between the different phases. The amortisation sequence will be included in Fitch's cash flow modelling.

Risks of idiosyncratic factors heighten as the transaction amortises and the pool becomes more concentrated. Fitch will analyse what mitigants address this risk. Typical mitigants have

included triggers that switch the amortisation profile to sequential at a later stage and minimum reserve fund provisions. Fitch will analyse such transaction provisions to assess their effectiveness in addressing this risk and to determine whether such idiosyncratic factors will constrain the ratings.

Revolving Transactions

Consumer ABS transactions sometimes have a specified revolving period, during which principal collections are used to purchase additional receivables rather than to repay notes. Revolving periods (similar to other mechanisms that allow the addition or substitution of assets) expose noteholders to additional risks from: (i) deteriorating collateral characteristics due to a substantial weakening of the originator's underwriting criteria, and (ii) the effect of a longer exposure to the economic cycle on asset performance. Typically, the longer the revolving period the more pronounced these risks become, and they are increased by a high portfolio churn when the assets have short durations.

Fitch's analytical assumptions account for these risks and any related structural mitigants. The risk of performance deterioration during a revolving period can be partially mitigated by adequately sized performance-based amortisation triggers and portfolio covenants (see *Portfolio Covenants: Concentration Limits and Replenishment Conditions* below for more details).

Revolving periods can vary by jurisdiction, asset or originator type. Before discussing any of the structural protections in the form of stop-revolving triggers below, Fitch will form a general view on the following factors: (i) stability of collateral characteristics; (ii) financial and operational strength of the originator and servicer; and (iii) incentives embedded in the originator's ownership structure. Notwithstanding any structural mitigants, Fitch may cap the maximum achievable rating of transactions, or may decline to rate them entirely, if any weakness in these factors is not adequately addressed.

Even with tight stop-revolving triggers and portfolio covenants, Fitch generally expects revolving transactions to benefit from greater credit enhancement than static ones, to account for the additional risks described above.

The same analytical principles as for revolving periods apply to prefunding periods.

Portfolio Covenants: Concentration Limits and Replenishment Conditions

In transactions where Fitch has assigned separate base-case assumptions to different sub-products, the agency will utilise the documented concentration limits to form a weighted-average base case. The agency will assume that, during the revolving period, the portfolio migrates towards a stressed case within the concentration limits (see *Eligibility and Portfolio Criteria* section for further details).

To assess a stressed-case portfolio, Fitch would first calculate a stressed replenishment mix, determined on the basis of: (i) the portfolio covenants and concentration limits; (ii) the maximum portfolio turnover achievable during the revolving period; and (iii) the asset selection practices and likely stressed origination mix. The maximum possible portfolio turnover is determined by considering the portfolio's scheduled amortisation profile and assuming that some receivables would prepay.

When assessing asset selection practices, the agency will make a distinction between a random strategy (e.g., when the transaction documents state that the purchased assets are randomly selected from the eligible receivables in the seller balance sheet) and a non-random strategy, which can take the form of either positive selection ("cherry-picking", when assets of better-than-average credit quality are selected) or negative selection. Finally, the stressed-case portfolio is built up by assuming that the assets that prepay are the less risky (e.g., those with low or the lowest expected loss) and that the proceeds from prepayments and amortisation are used to purchase additional assets in line with the stressed-case replenishment mix determined on the basis of the above considerations.

Revolving periods expose noteholders to additional risks with respect to a longer risk horizon, the portfolio asset quality and performance.

Fitch's analysis attempts to ascertain whether the given triggers will be effective in halting the revolving period in advance of a significant deterioration in asset performance.

Performance-Based Triggers

Transaction structures often use a variety of performance-based triggers to mitigate the risk of deteriorating asset performance. Such performance issues could arise from declining origination standards in a revolving transaction, and general deterioration in the wider economy. Typical performance-based triggers include the following:

- maximum dynamic delinquency rate;
- maximum dynamic default rate; and
- maximum cumulative default rate.

Fitch will review the impact of any triggers included in the transaction structure as part of its rating analysis to assess the extent to which they would limit performance deterioration before a revolving period ending, and therefore whether loose triggers could be a factor that might constrain the ratings.

The effectiveness of the triggers would generally be assessed in light of specific characteristics of the assets (e.g., estimated default probability, estimated recovery following default, yield and tenor) and the structural features of the transaction (e.g., length of revolving period and provisioning mechanism). Fitch will also assess to what extent the originator has the ability to reduce trigger effectiveness through buying back or restructuring the receivables and expects that such information be included in the transaction reporting.

Where performance triggers have been used, Fitch has observed that triggers are often set at levels that broadly correspond with assumptions at or around its 'BBsf' stress assumptions. However, triggers may be set higher or lower than this and Fitch's analysis will take account of the relative flexibility accorded to a transaction from rating triggers in its rating analysis. Notwithstanding the trigger, the notes remain exposed to the performance of the existing pool until maturity or repayment.

Some transactions may use additional credit enhancement to mitigate the risk posed where triggers allow for more flexibility for the length of the revolving period. Fitch's view on the ability of additional credit enhancement to mitigate a high degree of flexibility in revolving period length will be driven by a number of considerations including, but not limited to: (i) the extent of the differential between the triggers and historical performance; (ii) the history and outlook for the originator and asset class; and (iii) the duration of the revolving period. Fitch does not apply a formulaic link between credit enhancements and triggers, and additional credit enhancement is not always able to mitigate ineffective triggers.

Triggers based upon performance parameters that incorporate a significant time lag (for example those based on defaults or losses), or triggers that may be cured by originator actions (e.g., the repurchase of delinquent receivables) will be viewed as partially or wholly ineffective.

Credit Enhancement-Based Triggers

Fitch has observed that credit enhancement-based triggers have been used to mitigate the risk that the originator continues to transfer receivables to the issuer after the credit enhancement has fallen below the prescribed level. Examples of credit enhancement-based triggers include the following:

- no uncleared drawing on PDLs; and
- no unreimbursed drawings on cash accounts or liquidity facilities.

The specification of triggers will vary by transaction. For example, Fitch has seen triggers where the revolving period would cease on any interest payment date when the credit enhancement has fallen below its initial level. In such a case, Fitch will analyse the amortisation period by assuming that the credit enhancement will not be eroded in advance of the start of the amortisation period. When lax triggers apply (e.g., when the revolving period terminates only after the excess spread has not been sufficient to cover the PDL for two or more

consecutive reporting periods), Fitch will adjust its cash flow analysis and consider a degree of under-collateralisation at the start of the (early) amortisation.

Asset-Level Triggers

Revolving transactions often feature the ability of the issuer to hold cash as an alternative to reinvestment in receivables in the event that insufficient new eligible receivables are offered for sale by the originator on a particular purchase date.

Such structures are exposed to the risks of: (i) reducing excess spread due to negative carry; and (ii) increasing the exposure to the counterparty risks of the account bank. Fitch has observed transactions using the following structural mitigants to address such risks: (i) an excess spread trigger that causes early amortisation to start if excess spread falls below specified levels; and (ii) applying a cap equal to a percentage of total receivables to the amount that can be held as cash. Where Fitch concludes that the risks are adequately mitigated by the triggers, it makes no analytical adjustments.

Other Triggers

The occurrence of certain events that would have a negative impact upon the performance of the transactions are also typically used as early amortisation events. Such events typically include:

- a material deterioration in the financial profile or insolvency of the originator or servicer;
- the termination of the original servicer; and
- an un-remedied default or termination of a transaction counterparty (other than the originator or servicer).

Cash Flow Modelling

To determine the rating of a given tranche of notes, Fitch analyses the ability of the pool to generate the payment of interest and principal, according to the terms and conditions of such notes across a range of stress scenarios. Two cash flow models are used globally for this purpose: the Multi Asset Cash Flow model, used in EMEA, the US and Latin America; and the APAC ABS Cash Flow model. The models are functionally similar; they address complex transaction features and are an important consideration in determining the final rating. Fitch's use of models in monitoring existing transactions is described under *Surveillance* below.

Scenarios modelled by Fitch include: (i) increasing, stable and decreasing interest rates; (ii) different default distributions; and (iii) high and low prepayment rates. For particular transactions, other scenarios may be tested to identify the sensitivity of the transaction to different assumptions. For example, the agency will test alternative recovery distributions if the review of the servicer's recovery process or other transaction-specific considerations so warrant.

The primary variables feeding the cash flow models are the portfolio's scheduled amortisation profile, default, recovery and prepayment assumptions, portfolio yield, capital structure, priority of payments and interest rates.

Each cash flow model reflects how the various stress scenarios affect principal and interest payments as they are received each period throughout the life of a transaction. The cash flow model then allocates those payments to the various classes of notes, based on the priority of payments detailed in the underlying documents. If the cash flow model shows that a particular class of notes has received principal and interest payments according to the terms and conditions of the notes under the stress scenario for a particular rating, then it is deemed to have been able to sustain that particular stress scenario.

Fitch analyses a series of stress scenarios to determine whether the payment of interest and principal, according to the terms and conditions of the notes, is fulfilled.

Interpreting Model Results

For each class of notes, the set of cash flow model outputs available to a Fitch rating committee includes any shortfalls of principal or interest, timely or ultimate, at the modelled rating level. The model also produces the highest achievable rating. Regarding the timely payment of interest, Fitch expects that interest on highly rated notes is paid when due, regardless of whether the transaction documentation would allow any deferral, as described in its *Global Structured Finance Rating Criteria*.

Ratings are ultimately assigned by a Fitch rating committee that also considers other quantitative and qualitative factors listed in this report. The final rating considered appropriate by the committee may be one notch above or below the highest model-implied rating. In particular, if the breakeven default multiple is within +/- 0.1 of Fitch’s applied default stress multiple, Fitch may consider this as passing or failing at the commensurate rating level and assign ratings accordingly. For example, should the model output using the ‘AAAsf’ median default stress multiple of 5.0 show a model-implied rating of ‘AA+sf’, the committee may elect to assign ‘AAAsf’ should this be the model-implied rating using a default stress multiple of 4.9.

A committee can decide to assign ratings with more substantial differences to the model-implied rating, but this would constitute a criteria variation and be highlighted accordingly in the associated rating reports.

As discussed under *Set-Off* below, Fitch may determine that a lack of legal clarity in some aspects could expose transactions to set-off risk in scenarios that, while remote, would have a substantial impact on note ratings if realised. In such cases, Fitch may elect to cap note ratings below the highest modelled outcome.

In its rating publications, Fitch will discuss relevant indications given by the cash flow model runs in the scenarios summarised in the following table, the related rating considerations and, if applicable, any scenario(s) in which notes did not pass their related rating stress.

Summary of Standard Cash Flow Scenarios

Default distribution	Interest rate trend	Prepayment rates
Front-loaded	Rising	High
		Low
	Stable	High
		Low
	Decreasing	High
		Low
Evenly distributed	Rising	High
		Low
	Stable	High
		Low
	Decreasing	High
		Low
Back-loaded	Rising	High
		Low
	Stable	High
		Low
	Decreasing	High
		Low

Source: Fitch

In its cash flow model, Fitch applies a stressed-case weighting to sub-products, according to the transaction’s eligibility and portfolio criteria.

Fitch models asset performance from the commencement of the amortisation period. Where assets have been analysed as separate sub-products, the agency may model them separately, especially if there are substantial differences in the amortisation profiles or other characteristics, and input the default and recovery rates of each sub-product into the cash flow model, or model them as one pool, and input weighted-average (WA) assumptions. If the structure envisages a revolving period, the agency will review eligibility and portfolio criteria to determine the extent to which the portfolio composition, by sub-product, can change over time. In its cash flow model, Fitch will usually apply a stressed-case weighting to sub-products, according to the transaction-

specific eligibility and portfolio criteria (as explained in the section *Portfolio Covenants: Concentration Limits and Replenishment Conditions*).

Default Timing

The allocation of defaults over time can have a significant impact on an issuer's ability to pay its debt, since the timing of defaults affects the use of excess spread as it flows down the waterfall. In its cash flow model, Fitch will test three default timing scenarios to understand the transaction's sensitivity to the timing assumption. The 'back' default vector also intends to address the risk posed by assets with a back-loaded risk profile, when they feature high balloon amounts or residual value exposure.

The default timing scenarios shown in the following two tables will be applied depending on the term of the underlying asset pool. The two WAL terms are representative of a majority of consumer ABS portfolios. The months refer specifically to the point during the amortisation period when the receivable becomes delinquent; the receivables will be defaulted in subsequent months according to the transaction default definition – for example, the first defaults for a transaction with a default definition of three months will be applied in month four.

Default Distribution for 18 Months WAL Portfolios

Month (%)	1-6	7-12	13-18	19-24	25-30	31-36	37-42
Front	40	30	20	10	0	0	0
Even	20	20	20	15	15	10	0
Back	10	10	15	15	20	15	15

WAL – Weighted-average life assuming base case prepayments
Source: Fitch

Default Distribution for 30 Months WAL Portfolios

Month (%)	1-6	7-12	13-24	25-36	37-48	49-54	55-60
Front	30	30	20	15	5	0	0
Even	10	10	20	30	15	10	5
Back	5	5	10	15	25	20	20

WAL – Weighted-average life assuming base case prepayments
Source: Fitch

Fitch may adjust the standard default distributions for types of assets that in a stressed environment are likely to display more back-loaded defaults than the standard default timings indicated in the tables above (for example, loans with final balloon payments). In such cases, the rationale will be disclosed in the relevant transaction report.

For portfolios that fall outside of the standard WAL terms – for example, because of a much shorter or much longer asset life – Fitch will tailor the specific transaction default timing in line with product-specific historic observations and/or portfolio remaining WAL, and disclose the applied timing in the transaction reports. If the remaining WAL is particularly short (for example, when a full cash flow analysis is performed, in surveillance analyses close to a transaction's end), Fitch may apply no differentiation between the front-, even- and back-loaded scenarios.

In addition, when stressed default and prepayment assumptions reduce the portfolio so quickly that not all defaults can be allocated according to the distribution above, the agency may first reduce prepayments and, if this is still insufficient, bring the latest defaults forward and disclose in its transaction report that an adjusted distribution has been applied.

Recovery Timing

Just as the allocation of defaults over time affects the allocation of payments during a transaction's life, so the generation of recoveries over time also has implications. Cumulative recoveries on defaulted obligations are assumed to follow a time vector derived from static pool recovery data, adjusted if necessary to reflect future expectations, for example following

changes in the servicer's recovery process. The agency may also test alternative scenarios, determined case by case, where the transaction is particularly sensitive to the recovery timing assumption.

Prepayments

Fitch tests the impact of prepayments on the amortisation of the principal component of the portfolio. The base case annual prepayment rate, derived from historical dynamic data, is stressed upwards and downwards to test the transaction's sensitivity to changing assumptions.

The table immediately below outlines typical prepayment stresses. For example, at the 'AAAsf' level, a base case (BC) of 20% will be stressed up to 30% (i.e., 20% plus 10%) and downwards to a level between zero and 10% (i.e. 20% less 10%).

Fitch may occasionally use substantially higher prepayment stresses than outlined in the 'Upwards' column, particularly when the derived base case would be so low (e.g. 2%) that increasing it by up to 50% would not result in a meaningful upward stress. This would also apply to transactions with a very high reliance on excess spread, as observed for instance in Latin America, where prepayment stresses for the highest rating category may reach multiples of 2.0x-2.5x of the base assumption.

Fitch will use lower prepayment stresses in cases where asset pools have historically displayed both high prepayments and high defaults, as is the case in some consumer ABS. In such situations, we may need to modify prepayment and/or default timing assumptions so that all (stressed) defaults can be allocated in its transaction cash flow modelling, and disclose the transactions specific assumptions in our transaction research.

Prepayment Stresses

Rating	Upwards	Downwards
AAAsf	BC plus 50%	Zero to BC less 50%
AAsf	BC plus 40%	Zero to BC less 40%
Asf	BC plus 30%	Zero to BC less 30%
BBBsf	BC plus 20%	Zero to BC less 20%
BBsf	BC plus 10%	Zero to BC less 10%

Notch-specific prepayment rate stresses are derived by linear interpolation between the stresses applicable to adjacent rating categories. See footnote to *Default Stress Multiple* table for interpolation between 'AAsf' and 'AAAsf'
Source: Fitch

Fitch tests the cash flows for high and low prepayment scenarios. Transactions with positive excess spread will typically be negatively affected in high prepayment scenarios. However, transactions with negative excess spread or residual value exposure may be negatively affected in low prepayment scenarios (as prepaid contracts are not exposed to residual value risk). In such cases, the low prepayment assumption will be derived case by case, down to zero for lease contracts with very low prepayment histories.

In the case of auto loan and lease transactions, prepayment is often driven by the debtor's desire to purchase a new vehicle and therefore settle the outstanding financing on the existing vehicle. Often this trend may be encouraged by the marketing campaigns of the captive originators, leading to very high levels of historical prepayments. In such scenarios, Fitch may adjust historical prepayment levels downwards or upwards when forming a base case.

The impact of prepayment on the weighted-average yield rate is modelled indirectly by applying a deduction to yield, as described below.

Receivables' Book Value vs. Securitised Value

In some transactions, particularly in auto loan and lease ABS, the receivables are purchased by the issuer on a net present value (NPV) basis and therefore the principal balances for the purpose of the transaction will often differ from the contractual book value of the receivables.

This mechanism is often used to increase portfolio yield and create excess spread where borrowers benefit from subsidised, very low financing rates.

In contrast, for receivables purchased at a premium, the SPV in effect buys the assets at a price higher than their outstanding principal balance. If a prepayment occurs, the payment will be at this lower nominal balance, leading to a loss to the transaction. A gain would be realised for a receivable bought at a discount.

It is similar for defaulted receivables, where the outstanding book value the borrower defaulted on is different from the NPV used in the transaction. Applying recovery rates derived from historical book value data to the NPV would either overstate (for receivables purchased at a discount) or understate (for receivables purchased at a premium) the actual loss.

Where Fitch deems the amount and quality of data received adequate and the effect material to the ratings, it will adjust the recovery inputs in the cash flow model to account for the difference between contractual book value of the receivables and principal balance for the securitisation when applying recovery assumptions.

When the premium at which receivables are sold to the SPV is very high, Fitch also evaluates any risk from a misalignment of incentives, since the originator's financial gain at the point of the sale of the portfolio may undermine any underwriting prudence, as described in more detail in *Appendix 5*.

Portfolio Yield

Fitch reviews the current yield distribution for an amortising portfolio and the minimum warranted WA yield for a revolving transaction. The agency then applies a weighted-average coupon compression (WACC) which is driven by prepayment and default stresses, as it assumes that:

- higher yielding accounts are more likely to be subject to default, as accounts priced with higher interest are assumed to have less creditworthy borrowers, and are more likely to default; and
- higher interest paying accounts are more likely to prepay, as these obligors are more incentivised to find cheaper funding elsewhere.

Fitch therefore dynamically adjusts the pool interest rate distribution, and a new WA interest rate is calculated at each payment date to reflect the assumed change in the interest rate composition of the then-outstanding portfolio.

For transactions where the initial pool amortises along with the notes, Fitch uses the pool's initial WA yield as a starting point for its cash flow model, whereby 50% of defaults and 25% of prepayments are assumed to come from the higher rate buckets. Depending on the evidence of risk-based pricing, Fitch may amend these assumptions. For revolving transactions, Fitch normally models yield at the minimum WA yield that the portfolio covenants and eligibility criteria allow as a starting point.

Where Fitch encounters significantly elevated interest rates (e.g. in excess of 100%) it may apply haircuts to the modelled interest rates, to account for the risk that increased government regulation renders them unsustainable. This is particularly relevant in Latin America. Fitch's view on the level of sustainability will be included in the accompanying transaction report.

Delinquencies

The agency assumes in its cash flow modelling that all loans going into default in the respective rating scenario will have been delinquent for the period until they are recorded as defaulted according to the default definition in the transaction documentation.

Servicing Fee

Typically, the originator/seller of the receivables in ABS transactions acts as servicer. A range of fees have been seen across consumer ABS transactions, they can be amount or unit based. Fitch will apply stressed servicing fees to account for the potentially increased fee levels that a replacement servicer would expect to receive during a stressed period. Where contractual servicing fees are already similar to, or above, these stressed assumptions, Fitch will increase the values to the higher of the contractual or stressed level. The levels for servicing fees are specific to local markets and the applied stresses will be disclosed in the transaction-specific rating reports.

For EMEA, the observed fees across countries are sufficiently homogenous to apply one set of minimum stressed servicing fees, as per the rates in the table below.

EMEA Servicing Fee Assumptions

Rating ^a	AAAsf	AAsf	Asf	BBBsf and below
Fee assumption (bp p.a.)	100	90	80	70

^a The servicing fees are applied per rating category (e.g. 90 bp for the 'AA-sf' scenario)
Source: Fitch

In the US, stressed servicing fees are typically between 1% and 5%, as per the rates in the table below; the large ranges reflect the variety of securitised assets and variety of servicing platforms:

- pools with stressed servicing fees assumed at or close to 1% usually have the following characteristics: (i) prime borrowers; (ii) centralised and highly automated servicing; and (iii) an average loan balance above USD10,000.
- pools with stressed servicing fees at or closer to 5% usually have the following characteristics: (i) subprime borrowers; (ii) branch-based servicing, usually with intensive hands-on servicing; and (iii) an average loan balance below USD10,000.

North American Servicing Fee Assumptions

Rating ^a	AAAsf	AAsf	Asf	BBBsf and below
Fee assumption (bp p.a.)	100-500	90-500	80-450	70-450

^a The servicing fees are applied per rating category (e.g. 90 bp for the 'AA-sf' scenario)
Source: Fitch

The servicing fee assumptions applied in APAC are shown in the following table. They apply to the listed asset classes per country.

APAC Servicing Fee Assumptions

Country	Australia New Zealand	China	India	Japan	South Korea
Fee assumption (bp p.a.)	30-130	100	80-130	75-100	75
Asset classes	Auto loans and leases, equipment lease, unsecured consumer loans	Auto loans	Commercial vehicle loans	Auto loans and leases	Auto loans

Source: Fitch

The assumptions may differ for other jurisdictions or asset classes, or for types of receivables with non-standard features, in which case they will be disclosed in the transaction-specific rating report.

For transactions rated on the National Scale, the credit quality of the servicer may be at or above the level of the transaction rating, in which case Fitch may only model the documented servicing fee.

The agency will also model a floor amount during the tail period, when an amount-based servicing fee structure is used. For example, in EMEA the floor amount is typically equivalent to EUR250,000, but it varies widely globally and will be disclosed in the rating report.

Other senior expenses are modelled as per the transaction documents. In case Fitch deems an expense arrangement to be non-standard, any analytical amendments will be disclosed in the transaction rating report.

Available Cash Investments

In most ABS transactions, the issuer will hold some cash from principal or interest payments, either until the next payment date or until the available amounts are reinvested in other collateral. In particular, in cases where significant amounts of cash are held, the interest earned thereon over time can have an impact on the overall performance of the transaction.

Fitch makes an assumption about the amount of cash on the balance sheet of the SPV in each period and assumes that interest on this amount is earned at the lower of the reference rate minus 0.50% and the contractual interest rate, as per the transaction documents.

Interest-Rate Risk

Fitch will test the sensitivity of the transaction to interest-rate volatility by applying increasing, stable and decreasing (including negative, in some jurisdictions) stress scenarios in its cash flow model. The stresses for the relevant reference rate are as described in the *Structured Finance and Covered Bonds Interest Rate Stresses Rating Criteria*.

The impact of the swaps – which are intended to protect the transaction against interest-rate risk – will be factored into the cash flow modelling. In extreme cases, the interest rate, prepayment and margin compression risks can be fully transferred to a swap counterparty, thereby isolating the transaction from such risks but resulting in significant counterparty dependency. In such case, the increased counterparty dependency will be taken into account in the rating analysis, potentially resulting in a credit-link to the counterparty rating (see *Counterparty Risk* section).

Revolving Transactions

Fitch's cash flow analysis focuses on the amortisation phase. The agency will determine the extent to which it expects portfolio quality to evolve during the revolving period and assess the relevant portfolio characteristics and risk indicators prevailing at the end of the revolving period (e.g. the portfolio's scheduled amortisation profile, default and recovery assumptions, prepayment assumptions, portfolio yield). Fitch will use the results of this analysis as inputs into its cash flow model. For example, if revolving triggers are loose, the agency may assume that the portfolio at the beginning of the amortisation period is smaller than the initial liabilities.

Surveillance

Fitch utilises its two cash flow models under these criteria in its periodic surveillance process (the Multi Asset Cash Flow model in EMEA, the US and Latin America; and the APAC ABS Cash Flow model in the Asia-Pacific area). In EMEA, in lieu of the Multi Asset Cash Flow model, it may also use the Granular Asset Loss Analyser (GALA) model, as described below: the relevant rating action commentary will disclose which model is used in the surveillance analysis.

The GALA model tests if the transaction structure can withstand the stressed portfolio performance and other risk factors. GALA uses analytical assumptions, such as the remaining expected default and recovery rates, default multipliers and recovery haircuts. For transactions with longer default definitions, an assessment of the pipeline of delinquencies may be necessary. Certain cash flow elements are also incorporated — such as excess spread and recoveries from the existing stock of defaulted assets — to create a breakeven credit enhancement which is compared to the current transaction credit enhancement at each rating level. As an output, GALA produces the indicative rating level at which a given note would pass

the point-in-time rating stresses. A rating committee may decide on a different rating than suggested by the model, based on the materiality of any shortfall or excess in available credit enhancement.

A cash flow analysis will be conducted for the annual review of existing transactions, but there are some instances where the cash flow analysis will be considered unnecessary:

- None of the variables affecting transaction performance have changed beyond that expected at closing and credit enhancement levels are unchanged or have moved in line with expectations. Both conditions often apply to transactions still in their revolving periods.
- Modelling may not be conducted where the main constraint on a rating is an external factor (such as a sovereign or counterparty rating).
- In situations where the main purpose of modelling would be to assess the effect of rising credit enhancement or better than expected performance for notes that are already at their highest achievable rating, or capped, and where other variables are in line with expectations.

In any case, Fitch will perform a full cash flow analysis for existing ABS transactions in cases of a significant deviation of asset performance or a material change to the transaction structure. Examples include, but are not limited to, changes in or removal of hedging arrangements, or a note restructuring. Where applied, cash flow analysis for existing transactions will be performed under the same framework as for new transactions outlined in this report. The models are updated to reflect the prevailing characteristics and performance of the transaction, including outstanding note balances, status of triggers and asset performance.

In its surveillance cash flow analysis, Fitch will estimate the recoveries from defaults that have already occurred, if the stock of outstanding defaults is significant according to the rating committee. This analysis also depends on the availability of information on the time of those past defaults and on recoveries already received from them, based on the recovery vector assumptions at closing, adjusted if appropriate. Furthermore, Fitch will adjust the applied default rate for the stock of delinquent assets at the time of the analysis and trends in observed delinquencies, typically assuming that all assets more than 90 days past due will go on into default.

Counterparty Risk

The following section highlights counterparty risks that are common within consumer ABS transactions. Fitch emphasises, however, that they should be considered in conjunction with the relevant counterparty risk criteria specified below. The approach to counterparty risk is identical for the analysis of new and existing ratings.

Servicing

The servicer is appointed to collect payments from obligors and administer the outstanding accounts. In most consumer ABS transactions the originator acts also as the original servicer. Transactions are exposed to the risk that the original servicer defaults on its contractual duties. The risk is analysed in accordance with the *Structured Finance and Covered Bonds Counterparty Rating Criteria* and the *Global Structured Finance Rating Criteria*. See [Operational Risks](#) below for Fitch's analysis on servicers.

Commingling/Payment Interruption Risk

In most consumer ABS transactions the originator acts as the original servicer and continues to deposit collections on the receivables into its own bank account, before transferring such funds to the bank account of the issuer or SPV. Fitch analyses the resulting commingling and payment interruption risk in accordance with *Structured Finance and Covered Bonds Counterparty Rating Criteria*.

Set-Off

Deposit Set-Off

In consumer ABS transactions, set-off risk typically arises when the originator is a deposit-taking entity, which is often the case for retail banks and for certain car finance companies. If the originator defaults and deposits are lost, obligors may seek to legally avoid making loan repayments equal to the amount of the lost deposits. See also *Deposit Set-Off for EU Structured Finance and Covered Bonds*.

Non-Deposit Set-Off

Set-off risk also arises in some jurisdictions if the originator and the debtor are parties to another contract, such as an insurance contract, which relates to the contract under which the securitised receivables arise. One particular way in which the risk may arise is if the insurance premiums are financed up front by the securitised loan agreement and repaid by the borrowers over the term of the loan. Fitch will determine for each jurisdiction and based on transaction specifics whether a default of the related insurance or service provider gives the borrowers the right to withhold the part of their instalment that only arose due to financing the side contract. This risk is particularly pronounced in jurisdictions with strong consumer protection, such as the countries in the European Union.

Fitch would expect the legal risks of set-off to be addressed in the legal opinions. Where legal guidance does not rule out the risk of set-off, Fitch will consider the way any side contracts are financed, the creditworthiness of both the originator (as indemnity provider, if applicable) and the provider of the side product, the scope of any applicable compensation schemes and the actual amounts involved, to determine the materiality of this risk and size for it accordingly. If, after taking mitigating factors into account, Fitch determines that rating sensitivities need to be modelled with respect to this residual risk factor, it may decide to cap the note ratings at the higher of: (i) one category (three notches) above the rating achievable in that sensitivity scenario; and (ii) the higher of the rating of the indemnity provider (if any) and the provider of the side product, as the simultaneous default of both entities is more remote than the default of either entity. However, not capping the ratings as a result of modelled sensitivities, or capping the ratings at levels higher than outlined above, will constitute a criteria variation and will be disclosed accordingly in Fitch's rating reports.

Account Bank and Investments

The issuer often holds cash both as a result of monthly collections (e.g. collection and distribution accounts) and reserve accounts. Transactions with high levels of cash on hand will be particularly exposed to counterparty default if, for example, credit enhancement is provided primarily in the form of a cash reserve rather than subordination or overcollateralisation.

Fitch analyses the risks connected with the transaction's bank account structure, including replacement events, in accordance with *Structured Finance and Covered Bonds Counterparty Rating Criteria*.

Derivative Counterparties

In many structures, the SPV relies on an interest-rate swap or other hedging to mitigate interest rate and currency risks. The default of the hedging counterparty will therefore expose the SPV to such risks. Fitch will analyse the transaction's hedging arrangements in accordance with its hedging criteria.

Fitch's criteria on derivative counterparties are included in *Structured Finance and Covered Bonds Counterparty Rating Criteria* and *Structured Finance and Covered Bonds Counterparty Rating Criteria: Derivative Addendum*.

Operational Risks

Originator and Servicer Review

The originator and servicer review plays a key part in the analysis of consumer ABS transactions. For each transaction Fitch conducts a review as detailed in *Appendix 3*.

The key factors of the originator review are the company's and management experience, risk management, quality control, asset origination and underwriting skills, and the collateral risk assessment process. As well as reviewing the servicing processes, Fitch will review the specific products offered by the originator and developments in its origination and underwriting processes. This provides insights for the agency which can affect its analysis of the historical data. For example, if the originator has broadened origination channels and/or relaxed underwriting criteria, then Fitch would expect performance data to show a deteriorating trend, and vice versa (see *Default Risk* for further details). In addition, risk arising from specific product features will be identified and taken into account in Fitch's asset analysis. Material observations which Fitch makes during this review are factored into its rating process, by changing assumptions such as the multiple applied to the base case default rate.

The agency's assessment is also expected to cover the operational risk of servicers that act as counterparties in consumer ABS transactions. The quality, stability and experience of servicers directly affect asset performance and, ultimately, the transaction's performance. Fitch will analyse the management and staff experience, policies and procedures, controls, collateral disposal methods, historical servicing performance. The servicer's delinquency and default management strategies are expected to vary across asset types, and the servicer review will be focused on these specifics.

The quality and robustness of the servicer's IT platform may determine the limits by which the servicer can respond to deteriorating asset performance. Fitch expects that the servicer will have business continuity plans, with detailed disaster recovery procedures in place in the event that the existing servicing centre becomes unavailable.

For existing transactions, Fitch updates its assessment of the origination and servicing capabilities and procedures regularly, typically every 12-18 months, unless the transaction is very close to maturity or has built up substantial credit enhancement for the impact of the servicer assessment not to have a material impact on the analysis. In addition, the agency expects originators and servicers to provide prompt notification of any material changes to their servicing or, particularly relevant for revolving transactions, origination and underwriting processes. Absent any indications of a material change, typically the scope of the assessment will be narrower than performed ahead of a transaction's closing and may take the form of conference calls or questionnaires.

Rating Sensitivity

The ratings of notes issued in consumer ABS transactions are sensitive to the base-case default and recovery rate assumptions. Fitch will test a number of different default and recovery base-case assumptions to analyse the sensitivity of a note rating to changes in those assumptions. Where a particular reliance on excess spread leads to an increased sensitivity to prepayments, as is often encountered in Latin America, an additional prepayment sensitivity analysis will be tested and presented.

The three following tables show the range of tests typically applied by Fitch and indicate the change in rating (e.g. ratings migration) if the default and/or recovery base case is increased or decreased by a relative amount, based on a representative transaction (while maintaining the default stress multiples). For example, increasing the base-case default rate by 50% may result in a three-notch downgrade of class A from 'AAAsf' to 'AA-sf'.

Rating Sensitivity to Increased Defaults

Scenario	Default rate (%)	Class A	Class B	Class C	Class D
Base case (BC)	5.00	AAAsf	AAsf	Asf	BBBsf
BC defaults increase 10%	5.50	AA+sf	AA-sf	A-sf	BBB-sf
BC defaults increase 25%	6.25	AAsf	A+sf	BBB+sf	BB+sf
BC defaults increase 50%	7.50	AA-sf	A-sf	BBB-sf	BBsf

Source: Fitch

Rating Sensitivity to Reduced Recoveries

Scenario	Recovery rate (%)	Class A	Class B	Class C	Class D
Base case	50.0	AAAsf	AAsf	Asf	BBBsf
BC recoveries decrease 10%	45.0	AA+sf	AA-sf	A-sf	BBB-sf
BC recoveries decrease 25%	37.5	AA+sf	AA-sf	BBB+sf	BB+sf
BC recoveries decrease 50%	25.0	AA+sf	A+sf	BBBsf	BBsf

Source: Fitch

Rating Sensitivity to Increased Defaults and Reduced Recoveries

Scenario	Default/recover rate (%)	Class A	Class B	Class C	Class D
Base case	5.00/50.0	AAAsf	AAsf	Asf	BBBsf
BC defaults increase 10%/ BC recoveries decrease 10%	5.50/45.0	AA+sf	A+sf	BBB+sf	BB+sf
BC defaults increase 25%/ BC recoveries decrease 25%	6.25/37.5	AA-sf	Asf	BBBsf	BBsf
BC defaults increase 50%/ BC recoveries decrease 50%	7.50/25.0	Asf	BBBsf	BBsf	Bsf

Source: Fitch

The sensitivities illustrated only describe the model-implied impact of a change in one of the input variables. This is designed to provide information about the sensitivity of the rating to model assumptions. It should not be used as an indicator of possible future performance.

Specifically in the above sensitivity analysis, default and recovery rating stress levels have been kept constant in each scenario. As outlined in this report, Fitch typically applies different degrees of stress which approximate different points in time in the economic cycle. Therefore, to the extent that any change in base-case assumptions is driven by economic factors (as opposed to originator-specific factors) the rating impact may be less than that shown in the tables.

Limitations

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

Specific risks, such as excessive obligor, employer, industry or regional concentration, limited historical performance data, or legal or operational risks, may prevent Fitch from rating a transaction, or may limit the highest achievable ratings in the agency’s analysis. Fitch will assess the materiality and relevance of any limitations in accordance with its *Global Structured Finance Rating Criteria (Appendix 4)*.

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 our 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 impact 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 the criteria, but where the analysis described in the criteria requires modification to address factors specific to the particular transaction or entity.

Retired Criteria

Appendix 1: Applicable Criteria for SME Portfolios

When presented with a securitisation transaction, it is Fitch's decision how to analyse the portfolio and which criteria are most appropriate to address the inherent credit risks in the portfolio. Certain SME portfolios can present similar default risk characteristics to those of consumer loan portfolios, and therefore the *Global Consumer ABS Rating Criteria*, rather than the *SME Balance-Sheet Securitisation Rating Criteria*, may be deemed applicable for the analysis of those transactions.

Below is an overview of the guidelines Fitch uses to determine the appropriate analytical approach to a transaction. The primary differentiating driver is granularity. In the first instance the agency will consider the obligor type, although Fitch may apply the *Global Consumer ABS Rating Criteria* to SME portfolios to the extent that the characteristics of the portfolio and other considerations are deemed to be compatible with the analytical approach of such criteria. For each transaction the applicable rating criteria will be determined in the judgement of Fitch and highlighted in the transaction reports.

By and large, the *Global Consumer ABS Rating Criteria* will fit better portfolios that have most of the following characteristics:

1. borrower type: individuals (consumer regulation typically applies) and small commercial borrowers;
2. homogeneity and granularity of assets:
 - a. limited obligor concentration (typically average borrowers weigh less than five bp; mostly one asset per obligor);
 - b. the portfolio includes several thousand assets;
 - c. most asset balances are commensurate with a typical borrower's income;
 - d. similar product characteristics (origination channel, underwriting method, purpose, tenor, etc.);¹
3. concentration (in addition to obligor concentration):²
 - a. limited geographical concentration;
 - b. limited industry concentration; and
 - c. limited employer concentration.

¹ Portfolios containing receivables that are similar with respect to origination channel, underwriting methodology, purpose, tenor and size are more likely to be homogenous. Within a transaction, Fitch may analyse a portfolio by separate sub-pools.

² The consumer ABS criteria are not applicable to portfolios that exhibit significant performance volatility with respect to default rates. These are typically portfolios with a high degree of sector (ie employment of obligor), geographic and/or industry concentrations. In these cases, Fitch will typically utilise other rating criteria that explicitly address these concentration risks.

Appendix 2: Summary Data List

The following outlines the key data that Fitch utilises in order to apply the analysis outlined in this criteria report. In the absence of specific data, the agency will determine the availability of proxy data and the applicability of the rating criteria on a case-by-case basis. Any specific data shortages and any data adjustments will be highlighted in Fitch's transaction rating reports.

The list below under *Pool Data* does not cover residual value risk analysis, which may be encountered in EMEA auto loan or lease transactions and which is subject to a separate criteria addendum report. Further, this general list is not exhaustive, as additional data will be relevant for individual transactions to analyse specific risks (e.g. voluntary termination data on UK auto loans).

Pool Data

The following data, with respect to the provisional and final pool cuts, is usually presented in summarised stratification tables, as both outstanding balance and number of contracts. The data should be split by sub-product (e.g. new and used auto loans):

- initial and outstanding balance;
- obligor concentrations;
- balance split by instalments and balloon payments;
- period of origination and seasoning;
- origination channel;
- original term and remaining term;
- yield;
- geographic distribution;
- loan purpose and type of asset (if secured);
- initial balance as a percentage of asset value, ie loan-to-value (if secured);
- contractual portfolio amortisation schedule; and
- originator's loan-by-loan credit scores / risk categorisation (where used by the originator) and the originator's default expectations associated with each score/category; and
- for Italian salary-assignment loans, information on insurance companies and borrowers' employers.

Loan-by-Loan Data Tape: a loan-by-loan data tape is normally made available in certain transaction types (e.g. UK auto loan transactions that involve voluntary termination risk or Italian salary-assignment loan transactions) or where Fitch deems it beneficial for its analysis.

Comparison to Static Origination Data: to determine the stability of collateral characteristics within the historical performance data, Fitch will review stratification data of key parameters for each vintage contained within the historical performance data. Such historical collateral compositions should be split by sub-products and should ideally include the following information:

- underwriting scores – averages and split into buckets;
- down payment and/or initial loan-to-values – averages and split into buckets;
- terms – averages and split into buckets;
- balloon payment in relation to initial loan amount and/or car purchase price – averages and split into buckets.

Comparison with Originator's Portfolio: to compare the securitised pool with the overall pool of the originator, Fitch will review stratification data of key parameters for the overall portfolio of the originator.

Historical Performance Data

The following data should cover the original tenor of the underlying loans, and a minimum of five years of originations. The data should be split by sub-product (e.g. new and used auto loans):

- historical origination volumes;
- historical average receivable balances;
- static cumulative default amount by period of origination (following transaction default definition);
- static cumulative default numbers by period of origination (following transaction default definition);
- static cumulative recovery amount by period of default (following transaction default definition);
- static cumulative default amount by period of origination (following 90-day default definition);
- static cumulative default numbers by period of origination (following 90-day default definition);
- static cumulative recovery amount by period of default (following 90-day default definition);
- dynamic delinquency balances, split by ageing buckets up to point of default;
- dynamic default by amount;
- static or dynamic prepayment data; and
- for Italian salary-assignment loans, default and recovery data should be split by borrower type (eg private- and public-sector employees, and pensioners) and default type (eg death or job loss).

The transaction default definition is typically based on a threshold of days past due. To the extent the servicer initiates enforcement proceedings prior to that threshold, the outstanding balance of affected contracts would also be expected to be included as a defaulted amount.

In addition, Fitch will assess the parameters used to extract historical data and compare them against the transaction's eligibility criteria; it will make analytical adjustments where appropriate.

Market Data

Fitch will also consider the following market and industry data:

- consumer credit origination and receivable levels; and
- delinquency and default data, if available.

Performance Monitoring

For the monitoring of existing transactions, Fitch expects to be provided with detailed asset performance data for each collection period, including the following:

- end-of-period asset balance, including product and geographical breakdowns;
- end-of-period delinquent asset balance by delinquency category;
- principal collections in the collection period;
- interest collections in the collection period;
- balance of newly defaulted assets in the collection period;

- recovery amounts in the collection period;
- for revolving transactions only, balance of new receivables purchased in the collection period; and
- balance of loans modified, refinanced and repurchased in the collection period, including the status of the loan before the action.

Fitch also expects the following data to be reported regarding each payment date:

- end-of-period note balances;
- principal distributions to noteholders;
- interest distributions to noteholders;
- end-of-period cash account balances;
- cash account draws/deposits;
- period excess spread; and
- other issuer income and distributions.

In EMEA, Fitch's assessment of reports available to investors is summarised by an Issuer Report Grade, as described in the special report *EMEA ABS Issuer Report Grades*. A summary of the performance data is regularly reported on Fitch's subscription website (www.fitchratings.com) in the *Surveillance* section.

Retired Criteria

Appendix 3: Sample Agenda for Originator and Servicer Review

The following list outlines the information expected to be covered in an originator/servicer review for an auto loan, lease or consumer loan transaction, as described in the section *Operational Risks* in the main body of this report. Key components of the review are as follows.

Company Presentation

- History and business background.
- Management.
- Shareholders.
- Structure of the organisation.
- Company strategy.
- Review of recent financial performance.

Industry and Market

- Industry cycles.
- Projected supply and demand.
- Competitive position and growth strategy.
- Pricing and competition.
- Sales trends of products.

Origination and Marketing

- Contractual relationships with agents and stores and exclusivity of arrangements, by product.
- Payment structure, credit performance penalties and incentives for agents and stores.
- Marketing and advertising strategy, use of demographic information.
- Originator's procedures for ensuring that its standard forms used to originate the receivables comply with applicable law, are enforceable and are regularly updated to reflect changes in law and regulation.

Product Profile

- Term of receivables (if applicable, original term to maturity and remaining term to maturity).
- Dilutions, product returns and warranties.
- Maximum and minimum size.
- Setting of internal interest rates.
- Payment plan/amortisation.
- Type of products financed.

Customer Profile

- Obligor concentration.
- Industry.
- Geographic location.
- Financials.

Credit Underwriting

Staff

- Organisation of the underwriting department.
- Experience of staffing, and recruitment and training procedures.
- Centralised underwriting or branches.

Credit Policy

- Credit policy and procedures.
- Process for making policy changes.
- How different changes in the underwriting over the last years may have affected historical data.

Credit Scoring and Underwriting

- Use of credit scoring – demographic and behavioural.
- Method of building scorecards – in-house or outsourced.
- Key inputs to scorecard.
- Scorecard summarised back-testing results or discriminatory power measures.
- Use of external credit agencies and credit databases.
- Acceptance/rejection rate.

Exceptions

- Policy on exceptions and overrides.
- Review of exceptions to policy – annual limits to exceptions.

Account Acceptance

- Information required from customers – minimum acceptance criteria.
- Information verification procedures – fraud detection.
- Use of external credit bureau and database.
- Credit authorisation hierarchy from junior analyst to credit committee level.
- Subjective underwriting analysis – credit limits and information required.

Servicing and Collection Procedures

Staff

- Organisation of collection department.
- Experience of staffing, and recruitment and training procedures.
- Incentives and compensation schemes for increased productivity.
- Transferability of staff.

General Procedures

- Calculation of principal balance.
- Interest accrual methods.
- Method of payment receipt – post, direct debit, cash collection etc.
- Application of payments.

Delinquencies

- Identification of delinquent accounts, delinquency calculations and reporting.
- Late fees or other types of fees charged.
- Procedures for collecting delinquent accounts – timing and intensity of actions, automated warnings, telephone calls, doorstep call etc.

Charge-Offs

- Charge-off policy and timing
- Charge-off calculations and reporting (e.g. inclusion of expenses and accrued interest).
- Policy on extending, modifying and restructuring loans.
- Collection of insurance payments for defaulted accounts.

Recovery of Defaulted Accounts

- Use of external agents.
- Sale of non-performing debt at discount, whether opportunistically or through regular auctions or bilateral agreements.
- Repossessions and liquidation process (time line of default, repossession, foreclosure and resale or release).
- Timing of cash receipts from recovery procedures.

Operational Risk Procedures

Document Custody

- File maintenance and storage method and requirements.
- File access.

Quality Control

- Internal and external audits and quality control procedures.
- IT system (hardware and software).

Disaster Recovery and Emergency Plans

- Back-up site availability.
- Staff contacts and communication procedures.
- Alternative servicers.
- Recoverability of data – off-site storage of data.

File Review

Fitch aims to perform a limited file review to observe the origination and underwriting processes and practices, following the steps below:

1. Fitch will select about 10 accounts from the full list of account numbers included within the provisional pool provided by the originator for its limited file review;
2. Fitch will review original or electronic copies of loan agreements and supporting documentation (e.g. proof of identification);
3. Fitch will query and investigate any apparent inconsistencies between the file review and the policies of the originator presented in the originator review; and
4. Fitch will factor material observations in its rating process.

However, file reviews are not an established practice in all markets, and may also not be performed when no original contracts are generated, as is the case for business models that underwrite exclusively online.

Appendix 4: Static Data and Extrapolation Example

The following is a simplified example of the presentation and extrapolation of vintage default data. Extrapolation from historical data has the following limitations: (i) the extrapolation is based on historical performance and does not take into account future economic expectations; (ii) where the data presented is volatile, the extrapolation will exhibit greater volatility; and (iii) where younger vintages are performing outside of the trend, the extrapolation will extend this variation. Mean-reverting extrapolation methods that address points (ii) and (iii) exist, but may carry less information.

In the three following tables the rows represent the period when the receivables were originated, e.g. 2009 to 2015. The columns represent the period since origination, e.g. one to five years (we assume the typical term of the asset is five years). The figures below have been simplified to annual periods for presentation purposes; in practice, Fitch would analyse data in terms of monthly or quarterly periods.

In the table below, 3.4% represents the percentage of receivables originated in 2009 that had been recorded as defaulted one year after origination. After year two, a cumulative amount of 4.6% of receivables had defaulted, and so on.

Unextrapolated Defaults

(%)	Year 1	Year 2	Year 3	Year 4	Year 5
2009	3.4	4.6	5.1	5.2	5.3
2010	3.1	3.6	4.0	4.0	4.0
2011	3.1	4.2	4.6	4.6	4.6
2012	3.3	4.4	4.8	4.8	
2013	2.4	3.3	3.6		
2014	2.8	3.9			
2015	3.6				

Source: Fitch

In the following table, gradient factors are shown. The figure of 1.37 shows that, for the 2009 vintage, the amount of cumulative defaults increased by a factor of 1.37 between years one and two, ie 4.6% divided by 3.4%.

Gradient Factors

	Year 1	Year 2	Year 3	Year 4	Year 5
2009	-	1.37	1.10	1.03	1.01
2010	-	1.16	1.10	1.02	1.00
2011	-	1.37	1.09	1.01	1.00
2012	-	1.35	1.09	1.01	
2013	-	1.37	1.08		
2014	-	1.37			
Average		1.33	1.09	1.01	1.00

Source: Fitch

In the next table, the actual cumulative default observations as well as extrapolated through-the-average gradient factors and the data points are shown. For example, the projection for the 2015 vintage after two years is a default level of 4.8% — ie 3.6% times 1.33 — whereas the projection after three years for the same vintage is 5.2% — ie 4.8% times 1.09.

Extrapolated Defaults

(%)	Year 1	Year 2	Year 3	Year 4	Year 5
2009	3.4	4.6	5.1	5.2	5.3
2010	3.1	3.6	4.0	4.0	4.0
2011	3.1	4.2	4.6	4.6	4.6
2012	3.3	4.4	4.8	4.8	4.9
2013	2.4	3.3	3.6	3.6	3.6
2014	2.8	3.9	4.2	4.3	4.3
2015	3.6	4.8	5.2	5.3	5.3

Source: Fitch

Appendix 5: Receivables Book Value versus Securitised Value

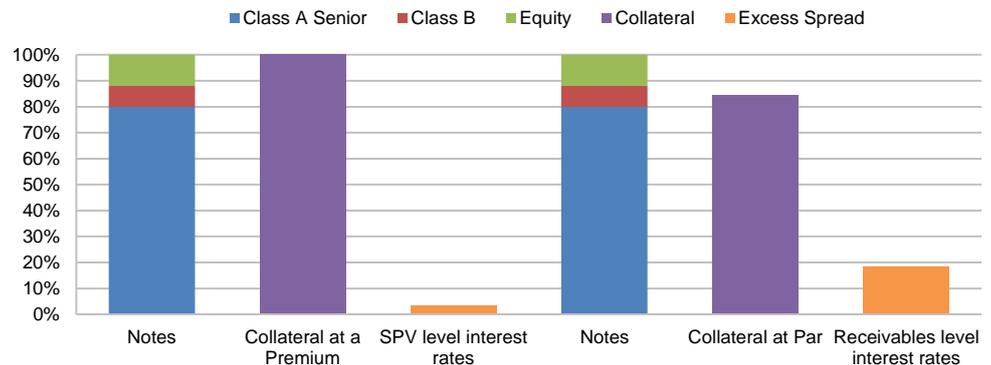
Static pool data underlying the key asset assumptions are usually reported based on the contractual book value of the receivables. A securitisation SPV may purchase the receivables on an NPV basis and, when the discount rate used differs from the contractual interest rate of the receivables, the principal receivables’ balance from the perspective of the issuer differs from the contractual book value.

Both purchases at a premium and at a discount are common, and both require an adjustment to the derived assumptions to make them applicable to the securitised receivables’ balance and special consideration is given in the prepayment analysis. There is no set materiality threshold for the analysis of the difference between book and securitised value, and the transaction report will highlight the specific adjustments made, including those described below.

Adjustment to Collateral Balance: In cases where the collateral balance was discounted at a lower rate the actual balance of the collateral is overstated (and represents hard credit enhancement to senior notes). In some cases, subordinate tranches may actually be under-collateralised at issuance and be solely dependent on asset interest to cover principal amortisation.

An example of this effect is illustrated in the following figure. The bars on the left hand side represent a structure with collateral sold to an issuer at a premium to match the entire note balance; the right side of the figure shows a note balance that is only partially backed by receivables’ principal: the subordinated classes rely on receivables’ interest for repayment.

Effect of Receivables Sold at Premium in Securitisation



Source: Fitch

Fitch considers that defaults, recoveries and resulting losses are derived on the basis of the undiscounted receivables’ balances, and thus an adjustment to securitised balances is required. To illustrate this, if a loan with an outstanding balance of EUR10,000 and a securitised balance of EUR8,000 defaulted and expected recoveries were EUR5,000 based on historical values, an upward adjustment to the recovery rate assumption would have to be made.

Prepayments Pose Challenges: Utilising a collateral balance discounted at a lower rate places a securitisation at risk of prepayments. The gap between the actual principal balance and the discounted balance is effectively a loss to a transaction for any contract that prepays (if the contract does not state that the obligor should make all remaining payments of principal and interest). Taken to the extreme, if a subordinate tranche is effectively under-collateralised at issuance and all of the collateral prepaid in full during the first month, the tranche would default without a single loss at the asset level. On the other hand, for receivables sold at a discount, prepayment gains will apply and may benefit the transaction depending on their classification as principal or interest proceeds.

Overstatement of Modelled Defaults: Utilising a higher-than-actual collateral balance and lower-than-actual interest rate also results in overstating the amount of principal defaults that a transaction can withstand in modelling scenarios, as some interest payments are allocated to principal in these scenarios.

Originate to Sell Risk: As selling the collateral at a premium to the origination value results in a gain on sale, issuers may be motivated to originate collateral primarily to sell in a securitisation. This can result in a misalignment of interests between the issuer and the investor. This effect will be mostly relevant in markets with particularly high-yielding consumer loan portfolios, for instance in Latin America, and will be analysed as part of the overall originator assessment, particularly for transactions with revolving periods.

Fitch uses the WA interest rate and term of the originator's portfolio, in conjunction with a transaction's minimum loan acquisition rates (purchase rate), to estimate collateral par value in its analysis. Hence, Fitch ratings are commensurate with credit enhancement levels, irrespective of the price paid for the receivables by the issuer.

Retired Criteria

Appendix 6: Salary-Assignment Loan ABS

In some countries, the use of payroll-deductible or salary-assignment loans (SALs) is a common practice among consumer lenders. The main characteristic of SALs is that the monthly instalment is deducted directly from the salary, or sometimes the pension, of the debtor. However, they are subject to specific risks which are assessed during the rating process. Fitch does not consider a loan in which the monthly instalment is deducted from the bank account of the debtor – where its salary is deposited – to be a SAL because this account can be subject to other restrictions and the debtor could have the ability to use these funds for other purposes. In Italy, SALs are regulated by law and have specific, homogeneous characteristics: Fitch analyses them against this criteria report's general framework, although specific considerations are described below in this Appendix.

Fitch's rating analysis for SALs is similar to standard unsecured consumer loans, with a number of notable additional considerations. In many SAL transactions the base case default rate can be lower than would be the case for standard unsecured loans, as SALs are not subject to the willingness-to-pay risk (the instalment is deducted before the salary or pension is received by the borrower). In some jurisdictions, payroll-deductible loans are also accompanied by mandatory insurance against loss of income following unemployment. Finally, servicing a SAL portfolio necessitates less direct interaction with borrowers, but requires specialised skills, which may affect the ease of finding a substitute servicer.

Legal Framework

For SALs, it is important to understand and analyse the legal framework overarching this collection system. The ability to deduct the instalment directly from a debtor's salary or pension is generally regulated, and the companies that have this ability must be authorised or sometimes supervised by a government entity. Rules and regulations governing these loans may be national or subnational laws, or even private agreements. Generally, national regulations are more stable than private agreements, since they are applied to more people and originators. If a concentration exists in a weaker payroll system, Fitch may apply specific stresses, or even categorise the loans as an obligation outside of the payroll collection system.

When analysing the legal framework, Fitch focuses on: who is authorised to deduct from the payroll; how this authorisation is granted; any limits to the maximum deductible amount; seniority; and operational collection features.

Performance Risks

Where Fitch identifies an employer, insurance provider or sovereign entity as being crucial to the performance of the rated notes, it may cap the maximum achievable rating.

Loss of employment is a strong performance driver and any significant portfolio employer concentration may affect the relevance of historical data as a guide to future performance. In cases of high concentration to employers of limited credit quality, or specific risk factors like single industry exposure, Fitch may cap the ratings of the notes due to the increased risk of mass redundancy that could impact the majority of borrowers. The same may apply for portfolios backed by SALs to public pensioners or public-sector employees, where a strong link to a sovereign exists.

If associated insurance payouts are a material source of recoveries for the loans, the creditworthiness of the insurance provider(s) may become an input in the rating process as well.

In Italy's case, Fitch applies a cap linked to the sovereign rating should the exposure to the sovereign (as ultimate employer and pension payer) be beyond certain thresholds, as described below; in addition, the presence of insurance coverage is a key consideration in the recovery analysis.

Operational Risks

The employer of the obligor, which could be either a private company or a government-related agency, is responsible for transferring the contract amount; in some jurisdictions it is referred to as retention agent.

Apart from the risk of loss of employment, employer concentration may imply additional operational risks for the structure, a risk usually mitigated by concentration limits; alternatively, Fitch could conduct sensitivity analyses to gain insight about the effect on the ratings. For example, if an employer represents more than 3% of the total pool, the agency would discuss whether any operational or credit exposures to this entity need to be considered for additional stresses.

Origination Process and Ongoing Operations

When originating SALs, the debtor typically presents pay-stubs, and in some cases a certification of the maximum deductible amount. One resulting operational risk in some jurisdictions is the possibility of an employee applying for loans from different finance companies at the same time. If this happens, it is possible that the combined amount withheld from the two companies exceeds the maximum allowed amount. In these cases, the employer generally has specific rules, such as first-in-first-out allocation, where the oldest deduction has seniority over any others until the maximum amount to withhold is reached. If two deductions are equally senior, the amount deducted could be distributed on a pro rata basis. This is one reason why it is important to have the first instalment paid in a SAL.

Operational risks also often differ for this type of transaction. For example, as long as the employers continue to transfer the collected amounts, the transfer of servicing for these loans is simpler as it involves fewer counterparties. However, management of technical arrears due to late-paying employers and reconciliation of multi-borrower payments may require more specific skills, so that servicer replacement – should there be the need – depends on the availability of suitable entities in the given jurisdiction. Fitch will assess the servicing continuity risk in line with its *Structured Finance and Covered Bonds Counterparty Rating Criteria*.

Italian CdQ and DP Loans

In Italy, SALs go by the name of *cessione del quinto*³ (CdQ), which involves the assignment of either salary or pension, and *delegazione di pagamento* (DP), which have lower security and are typically granted to employees who already have a CdQ loan.

As product features and risks are relatively homogeneous, we can lay out the following, more specific considerations about Italian SALs. They are regulated by law, which for CdQ loans mandates life insurance and, except for pensioners, employment-loss insurance; lenders typically require similar insurance arrangements for DP loans. The statutory severance payment at the end of the employment relationship (*trattamento di fine rapporto* or TFR) constitutes the first level of security, in priority to insurance, and is a factor for lenders to determine the initial loan amount.⁴ The following table summarises the key characteristics of CdQ and DP loans.

³ *Cessione del quinto* literally means 'transfer of one fifth', which refers to the maximum deductible amount of 20% of the salary or pension.

⁴ The TFR (and therefore its use as collateral) is limited to all private-sector employees and some public-sector employees.

Key Characteristics of CdQ and DP Loans

	CdQ loans	DP loans
Available to pensioners	Yes	No
Maximum deductible installment	20% of monthly after-tax salary	Sum of CdQ and DP loan up to 50% of monthly after-tax salary
Amortisation profile	Constant instalments, no balloons	Same as CdQ loans
Tenor	Two to 10 years	Same as CdQ loans
Prepayment limit	40% of instalments paid	No limit
Employer's consent required	No (it is an employee's right)	Yes
Security on TFR (where applicable)	Automatic, by operation of law	Employer and employee have to agree
Protection from foreclosure of employee's salary^a	Employee's other creditors cannot seize the transferred share of salary	Employee's other creditors can seize the transferred share of salary
Treatment in case of employer bankruptcy^a	Cannot be terminated by insolvency administrator	Can be terminated by insolvency administrator
Insurance coverage	Required by law, on life and (except for pensioners) job-loss events	Typically required by lenders, on life and (except for pensioners) job-loss events

^a In these cases, the stronger position of CdQ loans vis-à-vis DP loans is expected to be already quantified in historical data, so Fitch does not apply any different analytical treatment
Source: Fitch

In addition to the rating drivers listed on page 1 of this report, key risk considerations for these products in Italy include the typically large public-sector exposure and presence of mandatory insurance coverage. The first is described in the next two sections; the second one in [Recovery Analysis](#) further below. By contrast, the importance of the originator's underwriting skills is muted, as the verification and quantification of salary or pension is the key consideration.

Sizeable employer concentration is not expected to be a feature of Italian SAL portfolios. In the rare case that it should present itself it will likely be as a recognisable excessive concentration in one or two employers only; in other words, employer concentration risk will likely be binary. Fitch does therefore not maintain a set of scaled concentration assumptions, and if presented with this risk in its excessive form, will follow the considerations outlined below.

Concentration and Rating Cap

Historically, CdQ loans had only been available to public-sector employees, but were later extended to pensioners and private-sector employees. As mentioned above, Fitch has observed that most of the market consists of public-sector employees and pensioners (whose retirement income comes almost entirely from state pension, which is the norm in Italy); this makes Italian SAL portfolios particularly exposed to the public sector. As a result, the agency will follow its *Criteria for Country Risk in Global Structured Finance and Covered Bonds* and reduce the notch uplift from the sovereign IDR vis-à-vis the uplift applied to standard consumer ABS notes in Italy, as per the table below.

Reduced Notch Uplift from Sovereign IDR for Italian SALs^a

Notches from sovereign IDR^b	Public-sector exposure
6 (no additional limit)	Up to 33%
5-4	33% to 50%
3-1	Above 50%
0 (no uplift)	Only/mostly public-sector exposure in a few employers

^a This table is applicable as long as Italy remains within the 'BBB' rating category (ie between 'BBB-' and 'BBB+'); should this no longer be the case, Fitch may recalibrate the notch uplift

^b At the cap rating, the rating of the notes will take the same Outlook as the sovereign IDR, unless a different Outlook (or Rating Watch) is assigned for performance or counterparty reasons

Source: Fitch

Fitch anticipates that most SAL portfolios in Italy will be limited to a three-notch uplift due to high public-sector exposure. Exposure to portfolios whose top 10 employers (excluding INPS, Italy's pension provider) exceed 20% of the portfolio is considered significant employer

concentration; this would prevent the application of a three-notch uplift. For this purpose, employers are the entities where the employees work, rather than those that deal with salary deduction (as is sometimes the case for Italy's finance ministry).

Default Analysis

For this asset class, defaults can generally take one of three forms (and separate data are typically provided). Some default events are linked to insurance coverage: either to the borrower's death (life defaults) and loss of employment (job-loss defaults); while other, residual defaults occur after a certain number of missed instalments, with no insured event triggered.

Life Defaults: Fitch will assign a separate default assumption resulting from deceased borrowers. Such life default expectation will not be stressed along the rating scale as mortality, the key risk driver, is expected to remain stable over economic cycles. Fitch will set this assumption considering the mortality risk embedded in the portfolio's demographics (age and gender distribution)⁵ as well as the historical data; for revolving portfolios, Fitch will consider how the portfolio's demographics could negatively evolve to determine its stressed scenario.

Job-loss Defaults: For job-loss defaults, at the rating cap, Fitch will apply default multiples commensurate with two rating categories above the cap (up to 'AAAsf'), except for private-sector employees, who will not receive these higher stress. For example, for a cap at 'Asf', Fitch would apply a median multiple of 5x, instead of 3x, from the [Default Stress Multiples](#) table above.

Moreover, multiples above the standard criteria framework will apply to all ratings between the rating cap and the rating equal to one category below the sovereign IDR, as Fitch believes that stress on public-sector employment and pension payments may already materialise while approaching the sovereign default. Continuing the previous example, higher multiples would be interpolated between one category below the sovereign rating (so at 'BBsf', in this example) and the cap; the same stresses as in typical Italian transactions will be applied between the base case assumption and 'BBsf'.

The stressed default rate at the cap level will be subject to a 15% minimum sovereign stress applying to all public-sector employees; it will not apply to life defaults. Such stress is calibrated against cases of public-sector retrenchments during sovereign stress scenarios globally and addresses the lack of available precedents in most countries (including Italy). Whether the applicable RDR is derived from the stress framework described in the two previous paragraphs, or the minimum sovereign stress, intermediate stresses will be scaled down from it.

Other Defaults: Other defaults may occur without triggering an insured event. These may be due to instances in which the employment relationship has not ended, but the salary payments are suspended (eg sabbatical periods and additional maternity leave), or reduced (eg part of the salary backing a DP loan is seized through a court order). Fitch will treat this category in the same way as job-loss defaults, unless it is presented with sufficient evidence regarding the composition of such category; in which case, it may decide to apply a more lenient stress, which would be a criteria variation. To make this determination, the analysis will focus on the nature of the default events, the amount of the related recoveries (vis-à-vis unsecured recoveries typically achieved in the market) and their timing (recovery vintages evenly distributed over time may suggest the loan has cured and keeps paying regular instalments), and any cure data the originator can provide.

⁵ In particular, the mortality analysis will: (i) be based on mortality tables published by the Italian National Institute of Statistics (Istat); (ii) determine the expected number of borrower deaths for each age/gender portfolio bucket over such bucket's time to maturity; and (iii) convert the number of defaults due to deaths into the corresponding amount of defaults, considering the amortisation of the assets over time.

Recovery Analysis

The recovery analysis follows the same break-down as the default analysis, with the addition of a further split between CdQ loans and DP loans, as the latter have a smaller degree of security and will typically be haircut⁶ more than CdQ loans.

In case of life defaults, the insurance policy is the only source of recovery. For other default types, recoveries can be achieved through employment insurance pay-outs and other sources (first and foremost the TFR, if any). In both cases (ie death and employment loss), the treatment of recoveries from insurance companies is what differentiates this analysis, vis-à-vis the general criteria framework.⁷

Fitch will determine the base case insurance recovery assumption based on historical recovery data and including any quality adjustment for policy exclusions, the originator’s experience in dealing with insurance claims and as suggested by historical data on partial pay-outs and invalid claims. Given that insurance policies in this space are homogeneous and provided that historical data supports it, Fitch expects to assign most transactions an insurance base case of 95% of the relevant defaulted amounts; this is to account for invalid claims and delinquent instalments that may be excluded from the insurance claim.

This assumption represents a cap to the insurance recovery expectation, but the agency may lower it in light of historical data (showing lower recoveries), the originator’s experience in dealing with insurance claims and a review of the applicable policy exclusions. Moreover, unless a transaction’s specifics suggest otherwise, the agency will not assign different insurance companies different base case assumptions, because: (i) both life and job-loss insurance policies in this space have homogeneous terms; and (ii) a key performance variable is the originator’s ability to collect the required claim documentation and perform its duties under the relevant insurance policy – a factor that is not expected to vary significantly across insurers.

The credit Fitch assigns to insurance pay-outs in higher rating scenarios depends on the Insurer Financial Strength (IFS) rating or credit opinion on the relevant insurance company⁸ according to the following table. The IFS rating adjustment will be applied to the insurance recovery base case, so that if, for example, the base case is 95% and the ‘Asf’ adjustment is 33.3%, the resulting ‘Asf’ insurance rating recovery rate will be 95%*33.3%=31.6%.

IFS Rating Adjustment (%)^a

IFS of insurance provider	Note rating					
	AAAsf	AAsf	Asf	BBBsf	BBsf	Bsf
AAA	100	100	100	100	100	100
AA	75	100	100	100	100	100
A	50	75	100	100	100	100
BBB	0	0	50	100	100	100
BB	0	0	0	50	100	100
B ^b	0	0	0	0	25	100

^a Notch-specific ratings will be interpolated between IFS rating adjustments

^b No credit is given to insurers rated ‘B-’ or below
Source: Fitch

⁶ The relevant recovery haircut is determined in accordance with the [Recovery Rating Stresses](#) section of this criteria report.

⁷ For the avoidance of doubt, recoveries that are not generated by insurance policies (typically those from ‘other’ defaults) will be assessed under the general criteria framework (see [Recoveries](#) above).

⁸ In some cases, Fitch assigns a rating only to the parent company of an insurer included in the transaction. The agency will follow the principles outlined in its *Structured Finance and Covered Bonds Counterparty Rating Criteria* and assess (with the involvement of the rating analysts of the parent company) whether the unrated subsidiary can be considered as strategically important to its parent.

For revolving transactions, Fitch will determine a stressed portfolio as far as insurance distribution is concerned, taking into account the portfolio covenants as well as the replenishment capacity. In addition, to avoid disruptions in the recovery cash flows and any excessive deviation from the base case expectations, the agency will determine whether adequate concentration limits apply during the revolving period.

Given that the replacement of a defaulted insurer would generate replacement costs for the issuer, Fitch will consider the liquidity implications such a replacement may cause, depending on the concentration and creditworthiness of the insurers backing the portfolio; the conclusions will be disclosed in the transaction report.

Retired Criteria

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