



ICAP CRIF S.A.

**Structured Finance Credit Rating Methodology:
European Non-Performing Loan Portfolios**

August 2020

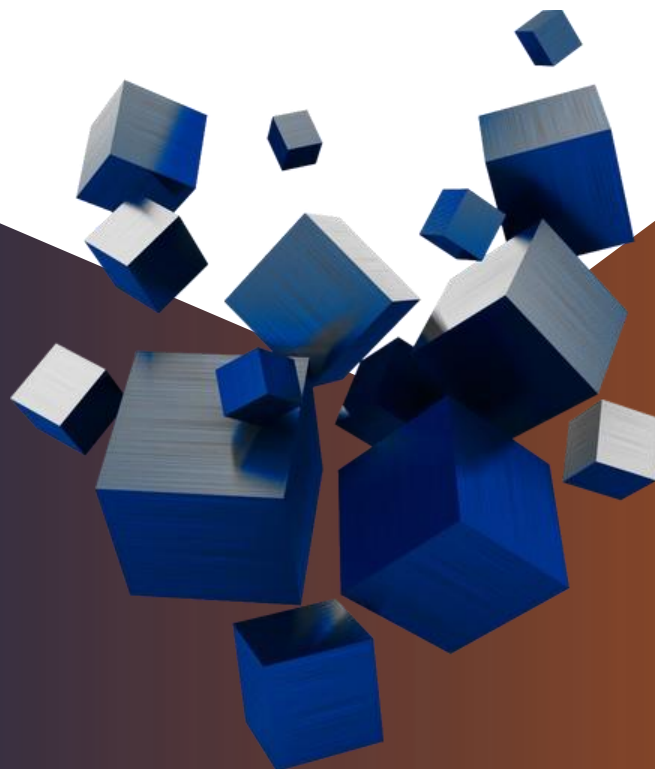


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1. Scope

This report presents a framework and the associated criteria for the rating of Structured Finance (henceforth SF) transaction notes including mortgage- and asset-backed securities and further elaborates on the rating of or non-performing loan transaction notes backed by cross-sector assets including both secured and unsecured loans. ICAP CRIF may publish asset class- or sector-specific additional criteria which should be read in conjunction with this report. Whenever asset class- or sector-specific criteria apply they take precedence over the respective criteria in this report.

2. Methodology Overview

Definition of SF Default. The event of default in structured finance transactions is defined as the failure to meet the contractual obligations arising from the transaction in time and in full.

Definition of SF Credit Rating. A SF Credit Rating reflects the level of confidence that a particular debt instrument derived from the respective securitization transaction will meet its contractual obligations in time and in full.

To determine such level of confidence, ICAP CRIF has developed a methodological approach combining both quantitative and qualitative assessments, which capture the risk properties of the underlying asset portfolio, the structuring of the transaction, legal and counterparty risks, as well as the operating performance of the Servicer and all parties involved. The rating process is organized in three phases.

In Phase I ICAP CRIF reviews the transaction term sheet and performs assessments on the quality of the available asset portfolio data tapes, the Originator policies and Servicer business plan and determines the possible macroeconomic stress scenarios until the maturity of the debt instruments.

In Phase II ICAP CRIF performs its purely quantitative analysis, which requires a minimum of five-year historical data for each element of the underlying portfolio of assets, to estimate the associated portfolio loss and recovery distributions. The latter incorporate specially designed flexible models to capture the likelihood of tail events, such as low-probability-high-impact losses and recoveries, a useful feature especially in the case of non-performing assets. Moreover, the distributions are re-parametrised so that the likelihood of both loss and recovery are conditional on exogenous macro- and micro-economic shocks. A rating scenario, reflecting a level of confidence, is then determined by the maximum net loss associated to a combination of chosen loss and recovery probabilities, conditional on certain exogenous shocks. Higher rating grades are associated to a combination of a higher probability of loss and a lower probability of recovery, thus reflecting a prudential stance by ICAP CRIF. The analysis produces an expected collection estimate, for each possible rating scenario, over the life of the debt instrument.

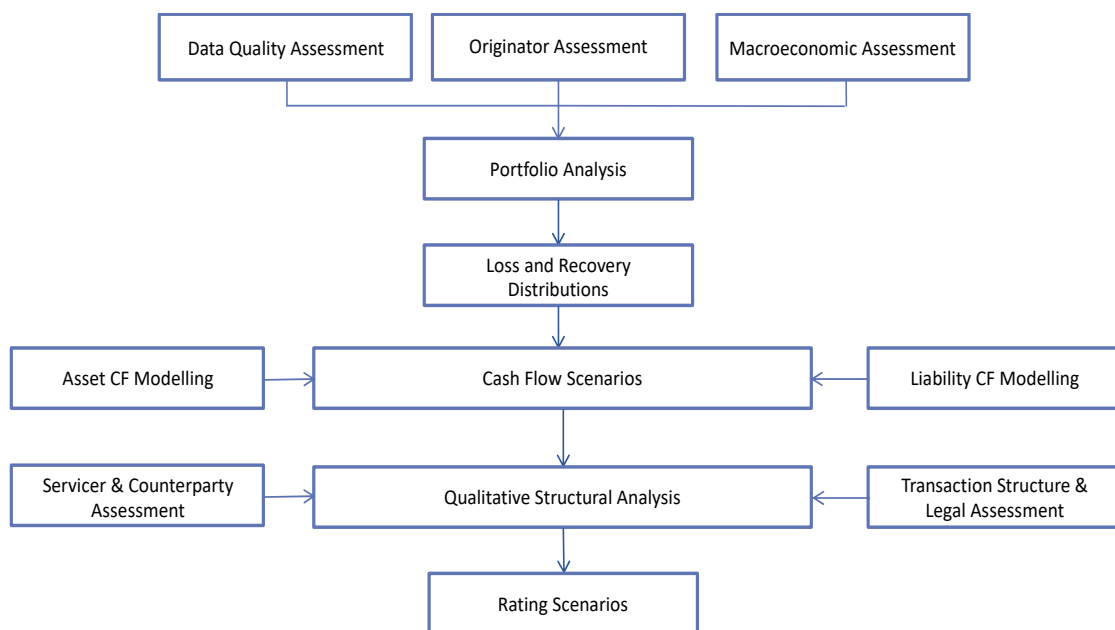
Expected collections are then allocated over time until the maturity date, based on the Servicer business plan, which is accordingly adjusted with additional volatility inversely related to the rating of the Servicer. The resulting set of rating-specific time series of expected collections is subsequently associated with the liability structure and expenses over time according to the assigned waterfall. If a note has received interest and principal in time and in full in a particular rating stress scenario and all additional costs of the transaction are met, then it is deemed to have passed that rating stress scenario.

In Phase III ICAP CRIF performs a number of systematic notching adjustments to account for possible effects of counterparty, legal structure and Servicer risks. In principle, such adjustments are expected to be mild but they can be severe if circumstances warrant.

3. The Credit Rating Process

Each phase consists of a number of distinct analyses which are linked according to Figure 1 and are described in some detail in the following sections.

Figure 1. ICAP CRIF Credit Rating Process



4. SF Credit Rating Scale, Definitions and Outlook Assessment

ICAP CRIF has adopted the following Credit Rating scale and definitions:

Low Credit Risk					Medium Credit Risk				High Credit Risk				Extreme Risk		
AAA _{SF}		AA _{SF}		A _{SF}	BBB _{SF}		BB _{SF}		B _{SF}		CCC _{SF}		CC _{SF}		C _{SF}
AAA _{SF} ⁻	AAA _{SF} ⁺	AA _{SF} ⁻	AA _{SF} ⁺	A _{SF} ⁻	BBB _{SF} ⁺	BBB _{SF} ⁻	BB _{SF} ⁺	BB _{SF} ⁻	B _{SF} ⁺	B _{SF} ⁻	CCC _{SF} ⁺	CCC _{SF} ⁻	-	-	-

AAA_{SF}: likelihood of timely and full payment of obligations extremely strong, effect of external adverse shock extremely small

AA_{SF}: likelihood of timely and full payment of obligations very strong, effect of external adverse shock very small

A_{SF}: likelihood of timely and full payment of obligations quite strong, effect of external adverse shock quite small

BBB_{SF}: likelihood of timely and full payment of obligations advancing, effect of external adverse shock moderate

BB_{SF}: likelihood of timely and full payment of obligations moderate, effect of external and internal adverse shock moderate

B_{SF}: likelihood of timely and full payment of obligations weak, effect of internal or external adverse shock strong

CCC_{SF}: likelihood of timely and full payment of obligations very weak, effect of internal or external adverse shock very strong

CC_{SF}: likelihood of timely and full payment of obligations extremely weak, effect of internal or external adverse shock very strong

C_{SF}: likelihood of timely and full payment of obligations remote, effect of internal or external adverse shock extremely strong

A Credit Rating can be optionally accompanied by a Positive, Negative or Under Surveillance Outlook, indicating that specific obligor characteristics, macro components, Service or Other Counterparties assessment criteria suggest respectively a prospect of change in the Credit Rating. It is linked to the projections for the future course of the Structured Finance transactions credit profile over the next 6 months based on the information currently available. This information reflects an evolving situation that may affect the Credit Rating.

The Outlook assignment procedure is part of the rating assignment procedure workflow (i.e. agreement between the Analyst and the Lead Analyst or decision by the Rating Committee). Moreover, the Outlook is assigned and reviewed in parallel with the assignment and the review of

the Credit Rating. Upon receipt of information required for an Outlook review, ICAP CRIF also reviews the Credit Rating itself.

The assignment of an outlook does not necessarily trigger a change in the Credit Rating. Moreover, any Credit Rating changes do not require in advance an assignment of an appropriate Outlook. Furthermore, there is no restriction in the direction of the Outlook change that may be performed during the review process.

5. Originator, Data Adequacy and Quality

As part of the effort to better assess the quality of the data, ICAP CRIF performs a series of assessments focusing on various aspects of the origination that may affect the quality of the underlying asset portfolio and the performance of the securitization transaction. Such assessments include the review of the Originator as a corporation and its financial and governance standing, its origination policies, risk management, loan monitoring and recovery procedures as well as human and information technology resources.

The Originator is typically responsible to produce a range of information required for the rating process, which typically includes a minimum of 5-year loan-by-loan data tapes to provide a historical record on asset characteristics and performance. Details on the minimum data requirements are available in the Appendix of this report. ICAP CRIF reviews the adequacy of data as well as the data quality through verification sample tests and third-party reports and may choose to enhance the data bases through proprietary data sets as well as extended empirical analysis if the data provided are inadequate or of poor quality. ICAP CRIF may refuse to produce a rating in case of incurable data. Additional to quantitative data, ICAP CRIF requires a range of qualitative data to assess the soundness of the transaction structure and counterparty risks, such as full legal documentation on the transaction structure, the Servicer business plan, as well as any credit enhancement or asset protection scheme information.

6. Quantitative Portfolio Analysis

The empirical analysis for each transaction-specific pool of assets is based on the construction of a static pool of loss and recovery data incorporating multiple loan vintages for a minimum historical period of 5 years. This allows to model and estimate separate loss and recovery distributions in each case conditional on weighted macro- and micro-economic effects corresponding to each vintage of loans. Given these estimates, ICAP CRIF performs a set of rating stress scenarios each one associated with a certain level of confidence for a loss and recovery combination. A high credit rating scenario is associated with a defined combination of a high probability of loss and low probability of recovery, whilst the immediately lower notch rating scenario is associated with two percentage points lower

confidence of loss and two percentage points higher confidence of recovery. When the next lower notch rating scenario belongs to a lower rating grade, e.g. from BB- to B+, the required confidence level change is widened to three percentage points.

6.1. Construction of Static Loss and Recovery Pools

Securitization transactions enter into an amortization period in which the portfolio of underlying assets is static. Each transaction is structured so that the specific pool of value established at its inception is available to cover losses until its maturity. For this reason, ICAP CRIF requires to establish a static data set covering a minimum of five years historical period immediately prior to the transaction. The size and depth of the required data set would also depend on the complexity and maturity of the transaction as well as the economic environment during the origination period of the underlying portfolio. A plethora of quantitative and qualitative features are required to populate every individual loan data tape, in which typically historical performance is recorded in amounts (e.g. originated, defaulted, delinquent and recovered amounts) accompanied by dates as well as loan- and obligor-specific characteristics.

Definition of Loan Default. As the joint evaluation of default and recovery constitutes the central feature of the rating process, it is important to reach a common understanding between ICAP CRIF and the Originator on the definition of loan default. This is an important point as the nature and the availability of data may vary, e.g. because of loan record heterogeneity due to bank mergers or changes in information technologies, which may force the adoption of varying definitions of default in different transactions. As a result, it is important that the analysis of historical data reflects the agreed definition of default.

Vintages of Loans. A static pool of loans or vintage contains the total number of loans of a banking book originated in a particular calendar period, e.g. month, quarter, year. As a result, the full banking book of an Originator can be decomposed into a series of loan vintages, likewise the portfolio of underlying assets in the transaction under study. ICAP CRIF reorganizes the loan portfolio data available into vintages, each one covering a partially overlapping historical term within the (e.g. five-year) total data period, and as a result early vintages span long time periods while late vintages span short time periods. For example, a data set covering a historical period of five years could produce twenty quarterly vintages, the first observed over twenty quarters and the last observed over one quarter, hence their observational asymmetry. To understand the on average historical evolution of the quality of the underlying portfolio and its predictive properties and relevance for the life period of the transaction, ICAP CRIF calculates for each vintage a number of key variables such as loss and recovery rates, among others. Given the vintage observational asymmetry, ICAP CRIF assumes that each vintage originates in the first quarter of the data set and employs extrapolation methods to

project, for each variable, the evolution of short vintages to the future. Thus, the set of vintages becomes observationally symmetric, and the on average temporal evolution of each variable can be obtained in each period as a weighted average of the variable across vintages, the weights being obtained from relative origination amounts.

Loss Curves. For each vintage of loans ICAP CRIF calculates the cumulative loss rate in each period, defined as the sum of losses produced in that vintage since its origination date as a percentage of its origination amount. A Loss Curve is defined as the plot of cumulative loss over time. Given the observational asymmetry of vintage-specific loss curves, ICAP CRIF employs extrapolation techniques to project the evolution of short vintage cumulative loss to the future, thus introducing observational symmetry. The on average temporal evolution of cumulative loss can be obtained in each period as a weighted average of the cumulative loss across vintages, the weights being obtained from relative origination amounts. The plot of weighted average cumulative loss rates over time is a loss curve characterising the historical recovery performance of the underlying asset portfolio.

Recovery Curves. For each vintage of loans ICAP CRIF calculates the cumulative recovery rate in each period, defined as the sum of amounts recovered in that vintage since its default date as a percentage of its total loss amount. A Recovery Curve is defined as the plot of cumulative recoveries over time. Given the observational asymmetry of vintage-specific recovery curves, ICAP CRIF employs extrapolation techniques to project the evolution of short vintage cumulative recoveries to the future, thus introducing observational symmetry. The on average temporal evolution of cumulative recovery can be obtained in each period as a weighted average of the cumulative recovery across vintages, the weights being obtained from relative origination amounts. The plot of weighted average cumulative recovery rates over time is a recovery curve characterising the historical recovery performance of the underlying asset portfolio.

6.2. Conditional Loss Distributions

The derivation of average cumulative loss curves allows for the predictive modeling of the portfolio loss distribution, giving rise to credit rating scenarios associated to a defined range of levels of confidence. We adopt a generalization of the Single Factor Model originally proposed by Vasicek (2002, 2015) who introduced a structural parametric expression for the limiting portfolio credit loss distribution when the number of loans increases substantially, allowing for the conditioning of its shape parameters on exogenous macro- and micro-economic shocks. In the following the model is briefly outlined to serve as a basis for rating analysis.

In the presence of a granular portfolio of n obligors, the asset return $R_{i,t}$ of each obligor i , is assumed to be generated by a Single Factor Model of the form

$$R_{i,t} = \sqrt{\rho_t} Y_t + \sqrt{1 - \rho_t} \varepsilon_{i,t}$$

where Y_t is a common factor across all obligors which is driven by the macroeconomic environment, $\varepsilon_{i,t}$ is an idiosyncratic factor specific to the i -th obligor characterising obligor-specific risks, while both factors are assumed to be mutually and serially independent random variables, the distribution of which will be defined in the following. Factor loadings are assumed to be fixed in the original version of the model, an assumption which will be relaxed in the present context to allow for conditional time variation driven by parameter $\rho_t \in [-1, 1]$, conditional on the information set I_{t-1} available at time t which may include a set of variables z_t , hence $\rho_t = \rho(z_t | I_{t-1})$. It can be seen that this parameter also captures the common pair-wise correlation between any two obligor asset returns. In this context, the analytical results of Vasicek (2002, 2015) remain valid conditional on variables z_t . The granularity of the underlying loan portfolio allows to achieve diversification effects which, at the limit, tend to eliminate the effects of idiosyncratic risks $\varepsilon_{i,t}$ introduced by individual exposures. As a result, systematic risk introduced by the common factor Y_t would be left to trigger default events. Deviating from the original normality assumption of Vasicek, and assuming that the common factor Y_t and the idiosyncratic factor $\varepsilon_{i,t}$ are generated by generic non-normal probability distributions $G(\cdot)$ and $H(\cdot)$ respectively, as the number of portfolio assets increases, the Vasicek model reaches a conditional limiting loss probability density function for the portfolio loss rate l_t of the form

$$pdf(l_t | \theta_t, I_{t-1}) = \sqrt{\frac{1-\rho_t}{\rho_t}} g\left(-\frac{K - \sqrt{1-\rho_t} H^{-1}(l_t)}{\sqrt{\rho_t}}\right) \times \left(\frac{1}{h(H^{-1}(l_t))}\right)$$

where θ_t is a vector of parameters including the correlation coefficient ρ_t and any parameters of $G(\cdot)$ and $H(\cdot)$ distribution functions, $g(\cdot)$ and $h(\cdot)$ are the respective density functions and K denotes the default barrier which is given by the inverse cumulative density of the composite asset return process $R_{i,t}$ as a function of θ_t . Batiz-Zuk et al (2013) specify $G(\cdot)$ and $H(\cdot)$ as Skew-Normal and Skew-t distributions allowing for the introduction of extreme shocks in the default process, which in turn produces heavier tails in the portfolio loss distribution. This generalised form of loss distribution introduces great flexibility for the empirical modelling of loss rates, accommodating a plethora of extremal distributional shapes which are empirically observed in various portfolios of diverse non-performing loans. Moreover, from a purely parametric point of view, the generalised loss distribution includes a large number of specific distributions as special cases, e.g. allowing the skewness parameter of Batiz-Zuk et al (2013) model converge to zero, the loss distribution reduces to the well-know Vasicek distribution of the form

$$pdf(l_t | pd, \rho_t, I_{t-1}) = \sqrt{\frac{1-\rho_t}{\rho_t}} \exp\left(-\frac{(\sqrt{1-\rho_t} \Phi^{-1}(l_t) - \Phi^{-1}(pd))^2}{2\rho_t} + \frac{(\Phi^{-1}(l_t))^2}{2}\right)$$

where ρ_t , pd and $\Phi^{-1}(\cdot)$ denote the conditional correlation, the unconditional probability to default and the inverse standard normal cumulative density respectively. Parameter pd controls the location while asset correlation ρ_t controls the shape of the density function. As correlation coefficient ρ_t increases, obligors' asset returns experience more intense common shocks, which in turn trigger increasing default and survival clustering and cause flattening of the loss density so that the probability mass in the right and left tail increases.

Evidently, the correlation coefficient ρ_t functions as the parameter controlling the shape of the loss distribution, thus heavily influencing the probability mass stored in its tails. Empirical stylised facts in credit portfolios suggest that asset return correlation exhibits substantial variation over time, tending to increase dramatically during turbulent periods, while its size and degree of variation differs across different asset classes. ICAP CRIF research suggests that the evolution of correlation coefficients is related to both macro- and micro-economic changes, thus in this methodology correlation is re-parametrised as a function which conditions its value in each period on a combination of observable variables z_t , e.g. GDP growth, economy-wide NPL ratio change and business confidence expectations, among others. The function is chosen so that ρ_t is restricted to guarantee the validity of the probability distribution.

Given the availability of historical loss rate data, l_t , produced through the portfolio loss curves, as well as the conditioning set of K variables included in z_t , the empirical task is to estimate the unknown loss distribution parameters. This is performed through the Maximum Likelihood estimation method, which requires the application of intense numerical optimization techniques. In the case of Vasicek loss distribution these parameters include pd as well as K coefficients combining the set of K exogenous variable into z_t . In the case of a generalized Vasicek loss distribution, e.g. through the Skew-Normal distribution, the set of estimated parameters is extended by the additional skewness coefficient. ICAP CRIF performed extensive empirical tests on a variety of portfolio data sets, suggesting the strong empirical relevance of the conditional model versus the unconditional one in explaining the observed data. The estimated conditional loss distribution provides a framework to assess the impact of future macro- and micro-economic scenarios on the distribution of future losses over the life of the transaction notes.

6.3. Conditional Recovery Distributions

The derivation of average cumulative recovery curves allows for the predictive modeling of the portfolio recovery distribution, giving rise to credit rating scenarios associated to a defined range of levels of confidence in conjunction with the complementary levels of confidence in loss distribution. The choice of the empirical model varies across a range of probability distributions capable of capturing the empirical properties of observable recovery rates in various asset classes. Without

being restrictive, for the case of portfolios of non-performing loans we opt for the Beta Distribution for the recovery rate r_t , with probability density function of the form

$$pdf(r_t|a_t, b_t, I_{t-1}) = \frac{\Gamma(a_t + b_t)}{\Gamma(a_t)\Gamma(b_t)} r_t^{a_t-1} (1 - r_t)^{b_t-1}$$

where $a_t, b_t > 0$, $\Gamma(\cdot)$ is the Gamma function and I_{t-1} is the information set available at time t . This model may accommodate a variety of distributional shapes, including U-shape, often observed in non-performing loan portfolios. Shape parameters a_t and b_t re-parametrised through functions which condition their value in each period on a combination of observable variables z_t , also used to condition the correlation coefficient of loss distribution. The functions are chosen so that the resulting conditional shape parameter a_t and b_t guarantee the validity of the probability distribution. Like in the case of the loss distribution, given the availability of historical recovery rate data, r_t , produced through the portfolio recovery curves, as well as the conditioning set of K variables included in z_t , the empirical task is to estimate the unknown recovery distribution parameters. This is also performed through the Maximum Likelihood estimation method. These parameters include $2K$ coefficients combining the set of K exogenous variable into z_t for both a_t and b_t but with different factor loadings. ICAP CRIF performed extensive empirical tests on a variety of portfolio recovery data sets, suggesting the strong empirical relevance of the conditional model versus the unconditional one in explaining the observed data. As in the case of loss distribution, the estimated conditional recovery distribution provides a framework to assess the impact of future macro- and micro-economic scenarios on the distribution of future recoveries over the life of the transaction notes.

6.4. Estimation of Rating Scenarios

Economic Conditioning. Given the estimated conditional loss and recovery distributions, ICAP CRIF performs a detailed macroeconomic scenario analysis for the full period covering the life of the notes, to determine three alternative economic conditioning scenarios: historical, moderate stress, heavy stress. Historical economic conditioning projects to the future according to historically observed data. Moderate stress economic conditioning projects to the future by imposing long-term adverse shocks to the historically observed data. Heavy stress economic conditioning projects to the future by imposing long-term heavy adverse shocks to the historically observed data. ICAP CRIF adopts the moderate stress scenario as its baseline scenario. Each scenario is then expressed in terms of specific values that the set of exogenous macro- and micro-economic factors may take in the future, resulting in a total of sixty rating scenarios, that is three sets of twenty rating scenarios each.

Rating Scenarios. A rating scenario reflects a defined level of confidence that a structured finance debt instrument will meet its contractual obligations in time and in full. This is determined by the

maximum net loss over the life of the note expected according to a set of chosen loss and recovery probabilities, conditional on exogenous expected macroeconomic conditions as well as the expected performance of the Servicer. The higher the rating grade of a rating scenario, the higher the defined probability of loss and the lower probability of recovery for that rating scenario. The analysis produces an expected collection estimate, for each possible rating scenario over the life of the debt instrument, which according to the ICAP CRIF 20—grade rating scale results in 20 rating scenarios. Expected collections are then allocated over time until the maturity date, based on the Servicer business plan, which is accordingly adjusted with additional volatility inversely related to the quality assessment of the Servicer. The resulting set of rating-specific time series of expected collections is subsequently associated with the liability structure and expenses over time according to the assigned waterfall. If a note has received interest and principal in time and in full in a particular rating stress scenario and all additional costs of the transaction are met, then it is deemed to have passed that rating stress scenario.

7. Servicer and Other Counterparties Assessments

The Servicer plays an important role in the performance of a securitization transaction, particularly crucial in the case of non-performing loan portfolios. ICAP CRIF has developed a systematic approach to the qualitative assessment of servicers/ other counterparties and their transaction-specific business plan, which is based indicatively on the assessment of the following topics:

- Organizational Structure,
- Business Continuity Plan (BCP), Disaster Recovery Plan (DRP),
- Compliance & Audit arrangements,
- Quality, Efficiency and Sufficiency of MIS,
- Resource Planning & Quality, Outsourcing arrangements,
- Servicing Performance evidence,
- Technology considerations,
- Financial Strength Assessment (e.g. 5-year business plan/M&A plan, financial statements),
- Incentives

ICAP CRIF places emphasis on the introduction of transaction-specific incentives and disincentives to the functioning of the servicer. In particular, it is the Ratings Agency's view that transaction terms aligning the interests of the servicer with those of the note holders e.g. when servicer's capital is subordinated to the rated instruments, or introducing success fees upon debt instrument retirement, build strong performance incentives for the servicer. On the other side, the introduction of minimum servicer fees could possibly introduce delaying tactics, while asset

manager remuneration policies linked as a percentage of recovered amounts could possibly lead to asset preselection tactics, in which cases one would expect adverse effects on servicer's rating.

8. Transaction Structure and Legal Assessment

8.1. Scope of the ICAP CRIF Credit Rating process

ICAP CRIF examines the legal risks arising from the Securitization process and, respectively, the notes issued and offered to investors, in order to identify any legal issues or weaknesses that could affect transaction's performance.

Securitization is a structured financial transaction involving the pooling and repackaging by the originator of a portfolio of its assets, mainly loans, and then the selling of that portfolio, to a Special Purpose Vehicle ("SPV") also called Securitization Special Purpose Entity (hereinafter "SSPE"). The SSPE then issues and places to investors tradable securities whose risk and return are linked to the capacity of the portfolio of underlying assets to generate cash flows during the course of the transaction. Through securitisation, risk is assumed by and returns are channeled to the investors.

ICAP CRIF assesses the legal integrity of the securitization structure by focusing on

- i) the assets transferred to the SSPE (the validity of transfer, the "true sale" character, its final and irrevocable character, the assets' quality etc.);
- ii) the SSPE issuing the rated notes and its legal structure (e.g. bankruptcy remoteness, segregation of assets and separateness covenants, in order to ensure that the transferred rights and assets are intact for the benefit of the noteholders); and
- iii) the transaction parties (e.g. enforceability of contractual obligations by the transaction parties).

Given the complexity of securitization transactions, presenting the legal risks in relation to the deal's core components and the rights of investors, as opposed to the rights of the originator, through a rating process indicating the credit quality of the notes is decisive for a series of reasons. Firstly, rating the securities irons out the information disequilibrium between the investors on the one hand and the main parties of the securitization transaction on the other hand. Secondly, rating the securities both enhances and verifies the securitization's quality. The importance of this rating is amplified by the fact that the underlying assets could be Non-Performing Loans (hereinafter "NPLs"). True sale and bankruptcy remoteness are on an EU-wide level the pillars in NPLs' securitisations. Furthermore, special domestic law of the Member States applies on NPLs' securitisation and on the terms and conditions under which a state guarantee is granted. For example, the Greek legal framework governing securitisation, and especially NPLs' securitisations comprises Law 3156/2003 on securitisation of claims and securitisation of claims arising from real

estate, Law 4354/2015 on the servicing of Non-Performing Loans and Law 4649/2019 on State guarantees on credit institutions securitisations programme. Understanding the complex legal landscape governing the NPLs' securitisation is necessary for any investor.

This report presents ICAP CRIF's standards and approach when conducting its rating. It intends to reflect topics such as the sustainability of the underlying receivables, the fit and proper character of the legal structure and the administrative organisation of the securitisation process. Moreover, it addresses the binding effect of the guarantees and security interests provided for the benefit of the investors and the main issues of solvency risk for each type of security issued by the SSPE, in order to allow the investor to make its own assessment as regards the underlying assets' risk and the soundness of the securitisation structure.

During the rating process ICAP CRIF will not undertake a primary review of all main documents of the transaction and will generally rely upon the content of legal opinions that the parties will make available to ICAP CRIF. The completeness of the data and their methodological approach (i.e. which aspects require a legal opinion), which is needed to secure a reliable rating, will, however, be reviewed. It is expected from the parties' lawyers who have drafted the legal opinions to identify at the outset whether there are any impediments in the securitisation and to indicate any reservations that might accompany their opinion.

8.2. The Assets

When rating the securities to be issued by the SSPE ICAP CRIF reviews the following points, in order to assess whether the assets produce cash flows able to cover the SSPE's liabilities and whether payments owed to the SSPE are valid and enforceable at the amount required.

1. General aspects relating to the assets

ICAP CRIF considers and evaluates, on the basis of a legal opinion, the legal nature and quality of the underlying assets, their suitability for securitisation, the validity and enforceability of the assets transferred under the applicable laws, whether the rules of the jurisdiction concerned regarding the legal form of the sale and transfer of the assets have been abided by (especially in relation to non-performing exposures and/or loans), the asset transfer's final and irrevocable character, whether there are any special rules (i.e. formalities, registration requirements) and restrictions regarding the asset transfer, and whether the respective rules of conduct have been observed. ICAP CRIF also expects that the eligibility criteria (among others: business relevance, no credit impairment, origination, assignability, encumbrance and enforceability) of the underlying assets are clearly reflected in the transaction documents based on the representations and warranties of the originator on the fulfillment of the eligibility criteria, as the case may be.

The two fundamental parameters for ICAP CRIF's evaluation of the assets are, though, the assets' ability to be insulated from the insolvency risk of the originator through a true sale, and the assets' encumbrance and enforceability.

2. Insulating the assets from the insolvency risk of the originator – the concept of true sale

In order to achieve that the underlying assets are beyond the reach of the originator and its creditors it is critical to ensure that the assets are transferred in a true sale and are not subject to material re-characterisation or clawback risks. Assets transferred by true sale will, by definition, not be part of the originator's estate. Thus, potential insolvency of the originator does not affect the transferred assets.

ICAP CRIF examines the governing law of the securitisation transaction, which is related to the risk of a transfer being re-characterized. For example, Greek Law provides for a perfection requirement for the asset sale and transfer, i.e. the registration of a summary of the asset sale agreement in the public registry set up under Law 2844/2000. Such requirement renders the asset transfer valid and effective against all parties, thus mitigating the risk of challenge or invalidation of the securitisation transaction in an insolvency of the originator. ICAP CRIF examines whether the perfection requirements, if any, have been respected, in order to avoid, in the event of the originator's insolvency, that the SSPE and the noteholders will be left with an unsecured claim against the originator.

Based on the above, ICAP CRIF requires the delivery of a legal opinion confirming the true sale or assignment or transfer with the same legal effect of the underlying exposures and its enforceability under the applicable law.

3. Enforceability: Encumbrance, set-off and dilution

ICAP CRIF also reviews if the underlying assets create legal, valid, binding and enforceable obligations on the underlying borrowers. In this respect ICAP CRIF particularly reviews possible waivers (their validity and conditions) of contractual or statutory (depending on the applicable jurisdiction) rights of the debtor to refuse full repayment to the creditor – i.e. via set-off (if the debtor holds a monetary cross-claim against a creditor), dilution or encumbrances of rights over the assets (i.e. pledge, mortgage or other security interest for the benefit of a third party). The exercise of such rights by the debtor or any other party could jeopardize the securitisation transaction and negatively affect the rating of the securities by ICAP CRIF. In case the originator assumes responsibility to indemnify the SSPE to cover enforceability risks, ICAP CRIF considers whether this could affect the true sale character of the assets' transfer.

Furthermore, the underlying assets should not be encumbered or otherwise in a condition that can be foreseen to adversely affect the enforceability of the true sale or assignment or transfer with the same legal effect. The above aspects are confirmed by a legal opinion.

8.3. The main counterparties involved in the securitization

1. The originator

The originator is the entity (i.e. credit institution, insurance undertaking, financial company, etc.) that initiates securitisation transactions, by getting involved, either itself or through related entities, directly or indirectly, in the original agreement which created the obligations, existing or potential, of the debtor giving rise to the exposures being securitised. ICAP CRIF evaluates the eligibility criteria for the originator (e.g. for securitisations in the context of the European legislation the originator shall be established in the EU). The originator is required by law to retain on an ongoing basis a material net economic interest of at least 5% in the securitisation (retention requirement). This obligation addresses the risk the interests of the originator and the investors not to be aligned throughout the securitization and prevents the recurrence of “originate to distribute” models. ICAP CRIF reviews the fulfillment of the relevant provisions pertaining to the retention requirement.

2. The SSPE

Through the SSPE the parties intend to achieve the insulation of the assets transferred by the originator from the insolvency risk of a parent or other related company or any other transaction party, and to secure that, in the course of the transaction, payments will be executed properly. ICAP CRIF considers the legality of the establishment of the SSPE (e.g. whether the SSPE possesses any necessary licenses and authorisations, whether it is managed by an independent board in relation to the originator, as to the legality of its constitutional documents etc.) based on a legal opinion assessing the fulfillment of the requirements for the establishment and the functioning of an SSPE in the relevant jurisdiction. In case the SSPE is established in a low-tax or no-tax jurisdiction, the legal opinion must address possible restrictions stemming from EU Law. Whatever the legal form of an SSPE may be, two traits should be preserved in each SSPE, namely the segregation of assets and liabilities from the rest of the transaction parties (non-consolidation) and bankruptcy remoteness.

a. Bankruptcy remoteness

The SSPE must be, as far as legally possible, insolvency remote in the event of the originator's insolvency and the SSPE must be set up and operate in a way that would render it highly unlikely to become subject to insolvency proceedings and, thus, functioning beyond the reach of the originator's liquidators or insolvency officers.

Since the noteholders' rights could be challenged in case the SPEE were granted the right to issue debt obligations other than the securitised notes, ICAP CRIF reviews the relevant documentation and verifies that there is a prohibition as to the provision of guarantees to any other entity or as to creating pledge over the assets to secure other entities' obligations. For transparency reasons ICAP CRIF also reviews if the documentation provides that the noteholders have no or limited recourse to other

assets beyond the financial collateral assets and that their payment will follow the cashflow waterfall.

For these purposes ICAP CRIF requires a legal opinion that addresses the issue of bankruptcy remoteness of the SSPE. The legal opinion must ensure that the SSPE operates on a solvent basis, that restrictions have been placed preventing the SSPE from incurring liabilities outside those contemplated by the securitisation, that restrictive covenants regarding the counterparties' ability to take unilateral enforcement actions against the SSPE and / or to undertake recourse to the SSPE's assets have been included in the documentation. Moreover, ICAP CRIF requires that no security interest or encumbrance over the receivables other than the pledge created by Law in favour of the noteholders has been or can be created upon the assets.

b. Segregation of assets and separateness covenants

ICAP CRIF requires a legal opinion that certifies that the SSPE preserves its independence and is not treated as a subsidiary or affiliate of the originator, that its operation is kept separate from the operation of the originator or any other transaction party and that the specific jurisdiction respects the legal separateness of the SSPE (non-consolidation).

ICAP CRIF will consider whether the prerequisites provided for by the Securitisation Law (for example, the Greek Law 3156/2003 as in force) in order to ensure the segregation of assets have been respected, e.g. as to the proceeds of the collections by the servicer or the SSPE arising from the assets and securities created over the assets, their deposit in a separate bank account held with a credit institution or financial institution in the European Economic Area in a manner clearly indicating that the amount is a separate asset, non-comingling with the assets of the servicer or the of the credit institution etc. ICAP CRIF reviews the relevant documentation as to its compatibility with the relevant provisions.

c. Special covenants

ICAP CRIF typically relies on appropriate positive covenants provided by an SSPE in the context of a securitisation. Some of the most common are the following: payment of principal and interest to noteholders when due, proper and timely dispatch of information and data, compliance at all times with the applicable legal and regulatory framework(s) relating to the securitisation and payment of all applicable taxes, fees and duties imposed by governments or public authorities in the jurisdictions involved in the securitisation.

Equally important are also negative covenants which usually include among others: sale or disposal or impairment of the underlying assets in any way other than as prescribed in the transaction documents, merger with another entity, reorganisation or structuring in a way that is not provided for in the transaction documents, commingling of the assets of the SSPE with those of another entity

and creation of new or additional security or encumbrances over any assets of the SSPE or impairment of the any security created by the transaction documents.

3. The servicer

When rating the securities issued in a securitisation ICAP CRIF reviews the servicing of the underlying loans, that is which party and under what conditions such party will assume responsibility for making sure that the underlying receivables continue to be collected and administered (serviced) after they are transferred to the SSPE. The proper administration of the loans and the timely collection of the receivables will guarantee that the necessary cash flows for the SSPE to discharge and fulfill its obligations towards the securities holders be made available.

European Laws contain special provisions for servicing companies, the replacement of the servicer through a backup servicer and the minimum content of servicing agreements which have to be observed. A servicing agreement must determine the claims to be serviced and the potential stage of the loan not being performed, the specific actions of servicing the claims (monitoring, negotiating with the debtors etc.) to be undertaken by the servicer and the servicing fees, which may not be passed through to the debtor. ICAP CRIF requires a legal opinion that verifies if the provisions of the Law on the above issues are met.

ICAP CRIF typically reviews said legal opinion and the transaction documents, and especially identifies the specific services to be provided by the servicer, the latter's relationship with the originator, as well as whether the originator assumes any obligations towards the servicer in the course of collection (i.e. disclosure obligation, etc.). The servicer is expected to discharge its duties as if it would manage its own portfolio. The servicer's ability to properly discharge said duties towards the SSPE and directly transfer the receivables to the SSPE is contingent on its credibility and solvency. On the other side, insolvency of the servicer may lead to liquidity, credit and other risks which could jeopardize not only the SSPE's ability to fulfill its duties as provided for in the securities/notes but also the securitisation in general. It is, thus, of fundamental importance to make sure that in case of an insolvency of the servicer the latter could be replaced and/or that there is a backup servicer in case particular events occur (these occurrences should be determined in detail in the contracts), by determining in the respective agreement between the SSPE and the servicer that the latter cannot resign before suitably replaced, by ring fencing the SSPE's assets and avoiding the commingling of the funds collected on the SSPE's behalf and other funds collected by the servicer. Each measure to deal with potential credit and liquidity risks and which guarantees a steady cash flow and the servicer's ability to fulfill its obligations is meticulously evaluated by ICAP CRIF.

Moreover, ICAP CRIF reviews the compliance with the Law as to the depositing of the sums received to a special and separate account kept solely for the satisfaction of the noteholders' claims towards

the SSPE and the general functioning of the SSPE according to the terms and conditions of the securities issued.

4. Other participants

Risks relating to the securitisation procedure are inherent in each transaction party depending on its role and performance. ICAP CRIF considers also the other participants involved in the particular securitisation and their respective exposure to the transaction, such as the principal paying agent, the registrar, the corporate services provider, the account bank, the cash manager, the depository bank and custody services, the sponsor/arranger, the liquidity provider and derivative counterparty, the monitoring trustee and any other participant as the case may be.

8.4. Taxation

Taxation affects all parties involved in the securitisation, especially – but not only – the SSPE and the investors. The tax burden in general and unexpected tax liabilities in particular, but also potential changes in the tax regime imbuing the functioning of the parties to the securitisation or the securitisation as a process may compromise the whole process. Taxation issues could arise in various stages of the securitisation and for all parties thereto (e.g. taxes on assets, taxes on the SSPE, taxes on third parties' or credit enhancement providers' payments). ICAP CRIF takes into account in the rating process the securitisation tax regime, including tax incentives for the purpose of enhancing tax efficiency, exemptions from any direct or indirect tax, stamp, contribution or rights for the benefit of the State or third parties are also taken into account by ICAP CRIF.

Because of the complex and jurisdiction-tied character of tax law, ICAP CRIF requires a legal opinion by tax experts, based in a complete tax analysis taking into account every aspect possible (nature of the underlying receivables, legal nature of the legal persons taking part to the procedure, administrative fees, stamp fees, double-taxation treaties governing cross-border taxation etc.).

9. Performance Monitoring and Reporting

ICAP CRIF dedicates resources for the monitoring of rated transactions and the assessment of their performance according to expectations. Among many factors, ICAP CRIF reviews material changes in the underlying asset perimeter, the servicing process and servicer quality assessment, periodic performance and regulatory reports of the servicer as well as changes in factors affecting credit enhancements. Each rated transaction is reviewed at least once per year or more frequently if events and key performance indicators warrant, which results in four possible actions: affirmation of existing rating, upgrade, downgrade and rating watch. The rating review and publicization process takes place in full compliance with Regulation (EC) 1060/2009 procedures.

10. Regulatory Compliance

ICAP CRIF is an accredited Credit Rating Agency since July 2011. Its Credit Ratings are compliant with the provisions of the amended Regulation (EC) 1060/2009 of the European Parliament and of the Council of 16 September 2009 on Credit Rating Agencies.

11. References

- [1] Batiz-Zuk E, G Christodoulakis, and S-H Poon (2013). “Structural Credit Loss Distributions under Non-Normality”, *Journal of Fixed Income*, Vol. 23, No. 1: pp. 56-75
- [2] Regulation (EC) 1060/2009 of the European Parliament and of the Council of 16 September 2009 on Credit Rating Agencies, *Official Journal of the European Union*, L 302
- [3] Vasicek, O. (2002). “Loan portfolio value.” *Risk* 15, 160–162
- [4] Vasicek, O. (2015), “Probability of loss on loan portfolio”, Chapter 17 in *Finance, Economics and Mathematics*, Wiley, DOI:10.1002/9781119186229

STATEMENT

The methodologies and procedures applied for the assignment of Credit Ratings are the intellectual property of ICAP CRIF, which has sole responsibility for their development, validation, review, monitoring and assurance of compliance. Credit Ratings assigned by ICAP CRIF should not be confused with those assigned by CRIF Ratings S.r.l., which is also an autonomous Member of the CRIF S.p.A. Group of Companies.