Structured Finance Rating Methodology

www.arcratings.com

Global Collateralised Loan Obligation ('CLO') Rating Criteria

This is an update to the methodology previously published on February 26, 2019.
There are no material changes and as such no rating impact.

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I. INTRODUCTION

ARC Ratings' Global Collateralised Loan Obligation ('CLO') Rating Criteria (the 'Criteria) applies to managed transactions comprising granular and diverse pools of assets, typically loan obligations, from small and medium sized enterprises ('SMEs'). The definition of SMEs may vary per jurisdiction but in line with the European Union definition, an SME may also include self-employed individuals, including artisans, sole traders and entrepreneurs, as well as small, medium sized enterprises and micro businesses. ARC Ratings will consider all these types of entities as SMEs within its rating analysis.

CLOs typically have three distinct tranches of liability: senior, mezzanine and subordinated / equity. The senior tranche has priority of payment before the mezzanine and the subordinated / equity tranche is the "first loss piece". The size of the senior, mezzanine and subordinated / equity tranches plays an important role in the ratings determination given the significance of subordination in a CLO transaction. Under a CLO structure that has super senior, senior, mezzanine and subordinated bonds, collateral principal is first paid to the super senior bonds, followed by the senior, mezzanine and subordinated bonds. Collateral losses of interest or principal are typically absorbed by excess spread, then by the lowest rated tranches and then by more highly rated tranches, in reverse order of payment priority. Overcollateralisation (OC) and interest coverage (IC) tests must be passed for interest to be paid to the individual tranches. If the tests are failed, interest and principal that would have been paid to the junior tranches will be diverted. Cash diverted under the interest waterfall may be used to acquire additional assets or senior tranches may be paid down until the OC and IC tests are passed.

The majority of CLO transactions are managed by a Collateral Manager, therefore an assessment of the Collateral Manager is crucial, as they may buy and sell assets in / out of the transaction subject to documented covenants.

This report provides an overview of how CLO transactions are analysed. The Criteria applies globally, although every individual country and specific transaction may give cause to additional observations or deviations, which will be disclosed in the transaction specific reports. This criteria addresses timely payment of interest, as well as ultimate repayment of principal.

An Indicative Rating - evidenced by the suffix (ind) – is a rating assigned by ARC Ratings to an issuer or an instrument (most commonly structured or project finance debt issues) when the assignment of a final rating is dependent upon the fulfilment of specific contingencies. Any material deviation in the fulfilment of these contingencies from the assumptions underlying the Indicative Rating can have a material impact on the final rating accorded, which accordingly may be fundamentally different to the initial Indicative Rating. Moreover, ARC Ratings reserves the right not to issue a final rating. Potential Investors are advised to bear this in mind when considering any indicative rating.

II. RELATED RESEARCH

This report should be read in conjunction with ARC Ratings' Global Structured Finance Rating Criteria, updated and published in September 2019, available on www.arcratings.com.

III. ANALYTICAL APPROACH

There are many aspects that make up ARC Ratings' analysis of a CLO transaction. These will be discussed in further detail throughout the Criteria. A list of data requirements can be found in Appendix A of this report. The key steps of the analysis however, are:

i. ARC Ratings will evaluate the quality and likely performance of the SME loan originator, servicer and collateral manager.

ii. ARC Ratings will analyse the loan obligations to be included in the pool, in respect of their current rating, performance, concentration and correlation.

iii. ARC Ratings will review performance data of the loan originator in respect of defaults and recoveries.

iv. ARC Ratings will calculate an annualised probability of default ('PD') of the pool as well as the stressed recovery rates at each rating level.

v. ARC Ratings will use the information in iv) above to then calculate a lifetime pool default rate for each rating level. This can also be known as the Stressed Default Rate. This Stressed Default Rate is based upon the calculated PD as well as the assets' concentration and correlation in respect of tenor, geography and industry.

vi. Within its analysis, ARC Ratings will also run a Cash Flow model. Such model will take into consideration stressed recoveries, recovery timings, default timings and interest rates. This information will be used to calculate a 'Break-Even Default Rate' for each rated tranche. This is the point at which the percentage of the portfolio collateral can be defaulted without the transaction experiencing a loss. ARC Ratings will compare the Break-Even Default Rate to the Stressed Default Rate in order to accord a rating in line with the transaction structure documented.

vii. ARC Ratings expects to receive full transaction documentation as well as legal and tax opinions for review.

RATINGS OF ASSETS

Typically, ARC Ratings would like to see an ARC Ratings rating of the underlying assets that indicated an implied hypothetical default probability, however where an ARC Ratings rating is not available, ARC Ratings will also accept ratings from other Credit Rating Agencies ('CRAs') where available. ARC Ratings will only notch from these ratings if it considers it has a different view in respect of methodology applied to determine the ratings. Where a rating is on Negative Outlook, ARC Ratings may notch down one notch from the existing rating of other CRAs. Where no rating exists, ARC Ratings may perform a mapping of a bank's internal rating scale or accord a credit estimate or shadow rating, which may be an unpublished point-in-time opinion of the approximate credit quality of an individual security, financial contract, or issuer for which we have not assigned a rating. In order to maintain up-to-date credit estimates, we require that the manager regularly provide us with relevant information. In the absence of such information, we will not be able to maintain the credit estimate.

IV. RECOVERY ANALYSIS

ARC Ratings analyses loan-by-loan data for CLO transactions. Recoveries form a key part of this analysis. International rating agency studies indicate that the average recovery rate on defaulted corporate senior unsecured debt obligations is approximately 40%. Note must be taken that the data supporting these studies is mainly derived from observations from the US market and other developed markets where rated debt issuance typically takes place. For other jurisdictions, lower average recovery rates may be expected, particularly if such jurisdictions have less developed legal systems and /or where practical enforcement of creditor rights is deemed a challenge. In addition, a corporate that has ceded the vast majority of its assets as security for debt obligations, will typically have a lower average senior unsecured debt obligation recovery rate. Recovery rates will be estimated on a case-by-case basis by ARC Ratings' rating panel.

Recovery timing is also a key factor in the analysis. This tends to vary per asset type and per jurisdiction. ARC Ratings will review timings in respect of current market practice, as well as within the transaction documentation, and will assess if the Servicer / Collateral Manager is considered able to recover upon the underlying assets efficiently. It is common that there will be a lag in respect of timing of recoveries. This lag is typically estimated at around 15 months, dependent upon the underlying asset types. This will be reviewed on a case-by-case basis.

V. STRESSED DEFAULT RATES

ARC Ratings will analyse a combination of historical performance data and current portfolio information of the underlying assets. Furthermore, ARC Ratings will calculate a PD for the underlying assets based upon current ratings and historical performance. Typically, historical performance will cover a 3-year period as a minimum. ARC Ratings will analyse loan-by-loan data in respect of par amount, defaults, prepayments, recoveries and scheduled repayments. If data is not available for specific assets, ARC Ratings may make conservative assumptions within its analysis. The analysis will assume a default rate for the portfolio of assets as a whole, based upon performance characteristics. It is therefore important that the underlying asset book is reflective of the 'true' originator's book and that loans have not been 'cherry picked' to enhance the portfolio and that they be reflective of the underlying business and its performance.

The definition of default, as applied to the underlying loans, can vary per jurisdiction and even per asset type, however a default is typically defined as when a borrower fails to pay after an applicable grace period. The standard definition of default is defined as 90 days past due i.e. 90 days after payment was expected.

ARC Ratings' model will take account of the asset life and asset correlations when calculating the Stressed Default Rate. The model will calculate a distribution of scenarios based upon varying rating levels. The Stressed Default

Rate will later be compared to the Break-Even Rate to determine the rating of the tranche of notes. Stress factors are the result of the analysis conducted of single-B corporate publicly available market default data, with additional stress applied to determine the stress factors applicable to higher ratings.

ARC Ratings will analyse the expected lifetime pool defaults and compare these against available credit enhancement at various stressed rating levels. Credit enhancement can appear in different forms such as over-collateralisation, subordination, excess spread and guarantees. Credit enhancement is a key factor in a structure as it is the mechanism that provides protection from losses on the underlying pool. Credit enhancement for the transaction should be proposed by the arranger through the capital structure. ARC Ratings will then, in most instances, calculate an expected loss rate to determine the appropriateness of the credit enhancement proposed, as well as perform cash flow modelling to test the level of availability of cash flows and credit enhancement in a stressed rating scenario.

ASSET LIFE

The life or tenor of an asset is considered in the analysis and is a key determinant in the establishment of a base case. Generally, if the pool is static the asset life will be the Weighted Average Life ('WAL') of the pool after factoring in each asset's amortisation schedule. For revolving pools, this is not so straight forward. Typically, for a revolving pool, the revolving period will be added to the WAL.

VI. CORRELATION AND CONCENTRATION

Typically for CLO transactions ARC Ratings expects to be presented with a granular, highly diversified pool of assets. ARC Ratings will apply positive or negative factors within its model to account for correlation and concentration. These typically impact industry and geographic correlation. Industry correlation is based upon an analysis of sectors grouped into 26 distinct industries (see Appendix C: Corporate Correlation). The industry grouping allows for insights on easily identified individual industry groups, where ARC Ratings can then apply its measure of average relative correlation. Where the portfolio is not particularly granular or diversified ARC Ratings may apply more stringent stresses to account for this.

VII. CASH FLOW ANALYSIS

ARC Ratings will run a cash flow model to analyse the cash flows in the transaction and determine a Break-Even Rate. Weighted Average Spread and Weighted Average Coupon will form part of this analysis. Principal collections based upon amortisation schedules are considered as well, these will also include default and recovery assumptions. The cash flow structure will model to transaction covenants. ARC Ratings will model the cash flows to accurately reflect the priority of payments defined within the transaction documentation. Payments may be pro rata or sequential and can vary dependent upon compliance or breach of certain trigger tests. The cash flow model will incorporate any over--collateralisation or interest coverage tests that divert cash flows to more senior asset classes, as well as reflect fees and senior costs and expenses of the transaction that may be paid out ahead of the note holders.

In some circumstances, recoveries in excess of par are classified as interest proceeds, however in the analysis any recoveries in excess of par are considered as principal proceeds until 100% of par has been recovered.

ARC Ratings expects to see a cap on senior fees and expenses. Where these are uncapped, they pose a potential risk to the transaction if paid out ahead of note holders. Fee caps are addressed in the cash flow model, where no such cap exists, the uncapped portion of fees are expected to be paid out after the note holders.

VIII. POOL COMPOSITION

Pools are expected to be granular and diversified. Where they are more concentrated, additional stresses may be applied through the analysis. ARC Ratings will typically analyse a worst-case pool. A worst-case pool is a portfolio that is constructed by assuming the limit of the transaction's covenants and portfolio guidelines and for static pools, the modelling should reflect the characteristics of the actual portfolio rather than a notional one. CLO pools can be revolving or static. Pool composition is reviewed at the initial rating as well as on a continuous basis. Factors that may impact the analysis are the geographic concentration, industry concentration, weighted average life, weighted average spread, asset type and security type, amongst others. ARC Ratings will expect to review eligibility criteria for the underlying assets. Also, the tenor of an asset is not expected to be longer than the tenor of the note it is financing.

ARC Ratings also expects to see performance triggers on the pool in relation to delinquency, loss and concentration. Again, these triggers will be reviewed at the initial rating as well as on an on-going basis.

IX. EVENTS OF DEFAULT

Upon an event of default there may be an acceleration of the notes, liquidation of the assets or note-holders may elect not to take action and let the book run off. Typically, the breach of an over-collateralisation test will trigger an event of default. If an over-collateralisation test triggers an event of default, this can potentially be detrimental to the non-senior class of note-holders. However, given the way an over-collateralisation test trigger is usually constructed this should have a negligible impact on non-senior ranking note-holders. Acceleration will ensure all cash flows generated are paid to note-holders in sequence of priority ranking until all cash flows are exhausted. Similarly, upon liquidation, the assets are sold, and cash flows are applied to note-holders in rank of seniority. Typically, there will be a vote of majority note-holders to determine the action to be taken in respect of liquidation or acceleration and ARC Ratings would expect this to be included in the transaction documentation.

X. COLLATERAL MANAGER REVIEW

ARC Ratings will carry out an on-site review of the Collateral Manager to ensure they can manage the transaction on an on-going basis. The Collateral Manager plays a crucial role in the transaction and as such, ARC Ratings will review the Collateral Manager's historic performance of managing such transactions, organisation, staffing, process and procedures, credit strategy, credit decision process in line with transactions features. This will form part of ARC Ratings' qualitative analysis. ARC Ratings will also look for replacement language within the documentation should the appointment of the Collateral Manager be terminated for any reason to ensure a replacement can be identified and transitioned seamlessly.

ARC Ratings may also elect to carry out an on-site review of the Originator / Servicer where a significant portion of the underlying portfolio composition comes from a small number of entities. The on-site review will take a similar form to that of the Collateral Manager and will focus on process and procedures, origination, credit granting, and servicing in respect of collections amongst others. If there is an existing Servicer Quality rating this will be factored into the analysis.

XI. LEGAL ANALYSIS

ARC Ratings expects to receive full transaction legal documentation as well as legal opinions, as discussed in its Global Structured Finance Rating Criteria updated in September 2019. ARC Ratings may request independent external counsel to review the legal opinion.

A separate tax opinion addresses all relevant taxes that could impact the transaction. Without limitation, this includes a description of the potential impact on the transaction of deferred tax liabilities, withholding tax, value added tax, stamp duty, transfer tax and corporate income tax. ARC Ratings is interested to understand how the transaction documents incorporate adequate provision for taxes in a cash reserve, where relevant.

There are many risks that can have an impact on the analysis of CLO pools and ARC Ratings expects these to be sufficiently mitigated. ARC Ratings expects counterparties to the transaction to meet its counterparty criteria set out in its Global Structured Finance Criteria available at www.arcratings.com. The following discusses some of these risks.

COMMINGLING

ARC Ratings expects, amongst others, the legal opinion to identify any commingling risk to which the transaction may be exposed and to describe any mitigants. If the risk is not appropriately mitigated, additional credit enhancement may be necessary to accommodate certain rating scenarios or deductions may be required within the portfolio analysis. This is assessed on a case-by-case basis.

Commingling risk can occur when a servicer defaults and money that has been paid to such defaulted entity cannot be transferred to the transaction timely; this therefore creates a liquidity issue to the transaction. In a worst-case scenario, there is potential risk that asset collections commingle with funds in the insolvency estate of the originator and are lost to the transaction.

SET-OFF

Set-off is another risk prevalent in CLO transactions. ARC Ratings expects set-off risks to be mitigated. This is typically done by the implementation of a funded reserve account, although ARC Ratings will consider other mitigants in its analysis. Where set-off risks are not mitigated, ARC Ratings will expect to receive information in respect of deposit balances held at the same deposit taking institutions as well as marked-to-market values of any loans that form part of the transaction composition. The set-off amount can then be calculated and applied in the analysis.

INTEREST RATE STRESS

A transaction may be sensitive to interest rate movements in the event that either the assets or the liabilities earn interest on a floating rate basis. The transaction account balances may also earn interest on a floating rate basis. ARC Ratings therefore runs a sensitivity analysis where certain movements of the relevant floating rate index are assumed. This movement is determined by analysing the historical behaviour of the relevant index and the expectations during the life of the transaction. ARC Ratings will disclose in each transaction specific report the relevant assumptions.

A swap may hedge (partly) the interest rate risk in a transaction. In this case ARC Ratings adds the swap mechanics to the cash flow model. ARC Ratings prefers the transaction specific swap notional amount to follow the performing asset balance in the transaction.

HEDGING

Hedging particularly of interest rates is important in CLO analysis. ARC Ratings will expect appropriate hedges to be in place. Where such hedges are not in place, ARC Ratings will look to other proposed mitigants to ensure there is no interest rate risk exposure in the transaction.

REPLENISHMENT

A common feature of CLO transactions is replenishment, i.e. where the Collateral Manager has the ability to sell new assets into the portfolio post-closing, typically these assets are purchased with the proceeds of amortised assets. The replenishment periods typically range from 2 to 5 years. Often, there will be a performance trigger in place, shortening the replenishment period if breached. This acts as a safe guard on the proceeds of amortised assets so that well performing assets are not replaced by assets of lower quality thus deteriorating the overall quality of the pool from that assessed at transaction closing.

LIQUIDITY

Liquidity is assessed within the cash flow analysis; however, liquidity issues may arise based upon the frequency of payment of liabilities versus asset collections. Liquidity risk may occur even on well performing portfolios. ARC Ratings expects liquidity risk to be mitigated, this can be achieved by reserve accounts, deferral triggers or other mitigants.

XII. PERFORMANCE MONITORING

Ongoing monitoring of performance of transactions and the underlying assets is key to the initial rating process as well as to the maintenance of current ratings. ARC Ratings expects sufficient performance information to be provided on a monthly / quarterly basis. ARC Ratings also expects to be notified of any changes to the transaction such as amendments to concentration limits, interest rates etc. that may impact the current rating and its analysis.

Upon each reporting period, ARC Ratings will review the performance information provided to ensure it is reflective of the information used in the analysis at the outset. In addition, surveillance rating panels are held annually at a minimum or as events warrant. Negative or improved performance of the underlying portfolio may trigger a potential rating action. For public transactions ARC Ratings will publish a performance report on an annual basis at a minimum or as events warrant.

XIII. QUALIFICATION

Note that ARC Ratings is not a legal, taxation or financial adviser and will only provide a credit opinion of the rated securities. For example, a rating does not cover a potential change in the applicable laws nor can it be regarded as an audit. Moreover, ARC Ratings is not a party to the transaction documents, nor does it provide legal, tax or structuring advice.

APPENDIX A: DATA REQUIREMENTS

To assess a CLO portfolio ARC Ratings expects to receive loan level data including the following information as a minimum:

- Originator's internal scoring / external ratings accorded

- Originator's default data
- Default data on a monthly / quarterly basis (this should include number of loans, as well as par amount of originated per period and number of loans that default per cohort)
- Collection and prepayment data on a monthly / quarterly basis
- Recovery data
- Delinquency data split per delinquency bucket for each origination cohort
- Concentration data including industry and geographic region
- Interest rates applied
- Amortisation schedule for assets
- Weighted average life of assets
- Proposed triggers and covenants
- Capital structure
- Origination date
- Legal maturity date
- An overview of the scheduled interest and principal to be received each month on the cut-off portfolio
- Other relevant data

In the event that the historical data does not cover a full economic cycle, ARC Ratings may also use other sources to complement the originator's information.

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APPENDIX B: AVERAGE CUMULATIVE ISSUER-WEIGHTED GLOBAL DEFAULT RATES BY ALPHANUMERIC RATING

AVERAGE CUMULATIVE ISSUER-WEIGHTED GLOBAL DEFAULT RATES BY ALPHANUMERIC RATING, 1983-2013*

Rating	Equivelent Rating	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Aaa	AAA	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Aa1	AA+	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.6	0.8	0.8	0.8	0.8	0.8	0.8
Aa2	AA	0.0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.3	1.5	1.8	2.0	2.1	2.2	2.4	2.7	3.0	3.4	3.7
Aa3	AA-	0.1	0.1	0.2	0.4	0.5	0.7	0.8	0.9	0.9	1.1	1.3	1.6	1.8	2.0	2.1	2.3	2.5	2.9	3.5	4.2
A1	A+	0.1	0.3	0.5	0.9	1.2	1.4	1.7	1.9	2.1	2.3	2.6	2.9	3.2	3.6	4.0	4.5	5.0	5.4	5.7	6.0
A2	A	0.1	0.2	0.4	0.7	1.0	1.4	1.9	2.4	3.0	3.4	3.8	4.1	4.4	4.8	5.3	5.8	6.7	7.5	8.2	8.8
A3	A-	0.1	0.2	0.5	0.8	1.2	1.5	1.9	2.4	2.9	3.3	3.6	4.0	4.4	4.8	5.5	6.0	6.6	7.4	8.2	9.0
Baa1	BBB+	0.2	0.4	0.7	1.0	1.3	1.7	2.0	2.2	2.4	2.7	3.0	3.5	4.0	4.5	5.2	6.1	6.9	7.3	7.5	7.7
Baa2	BBB	0.2	0.5	0.9	1.4	1.8	2.4	2.9	3.3	3.8	4.5	5.3	6.2	7.0	7.8	8.5	9.2	10.0	11.0	12.0	12.5
Baa3	BBB-	0.3	0.8	1.4	2.0	2.8	3.5	4.2	5.1	6.0	6.9	7.6	8.1	9.0	10.1	10.9	11.9	13.1	14.1	15.2	16.1
Ba1	BB+	0.7	2.0	3.7	5.6	7.4	9.2	10.7	11.8	12.7	13.9	15.2	16.7	17.8	18.6	20.0	21.2	22.5	24.1	26.4	27.9
Ba2	BB	0.8	2.1	3.8	5.6	7.3	8.6	9.9	11.4	12.8	14.0	15.6	17.3	19.3	21.0	23.2	24.8	26.2	26.7	26.9	26.9
Ba3	BB-	1.7	5.0	8.8	12.8	16.0	19.0	21.6	24.3	26.9	29.5	31.6	33.5	35.6	38.5	40.5	42.4	44.0	45.5	47.0	48.5
B1	B+	2.3	6.5	10.9	14.9	19.0	23.0	27.3	30.8	33.9	36.8	39.3	41.8	44.4	47.0	48.6	50.1	51.9	53.5	55.5	58.0
B2	B	3.5	8.9	14.4	19.4	23.7	27.7	31.3	34.4	37.5	40.0	41.7	43.0	44.3	45.7	48.0	49.9	51.0	53.7	54.1	54.1
B3	B-	6.0	13.0	20.0	25.8	31.0	35.6	39.4	42.6	44.8	46.8	49.0	51.4	52.9	54.1	55.0	55.0	55.3	55.7	55.7	55.7
Caa1	CCC+	7.5	17.1	25.7	33.0	39.9	44.8	48.2	51.3	55.5	59.5	64.5	69.8	78.2	82.3	82.3	n.a.	n.a.	n.a.	n.a.	n.a.
Caa2	CCC	17.5	29.4	38.6	45.7	51.0	55.8	60.0	63.6	67.4	70.3	72.5	72.5	72.5	72.5	75.1	79.6	80.9	80.9	80.9	80.9
Caa3	CCC-	29.1	44.8	53.5	60.0	66.1	68.7	72.3	76.7	79.6	82.6	82.6	82.6	82.6	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ca_C	CC	42.7	55.0	64.2	70.8	76.3	78.0	80.6	84.0	85.2	85.2	85.2	85.2	85.2	85.2	85.2	85.2	85.2	85.2	n.a.	n.a.
Investment Grade		0.1	0.3	0.6	0.9	1.2	1.5	1.9	2.2	2.5	2.9	3.2	3.6	4.0	4.4	4.8	5.3	5.8	6.4	6.9	7.3
Speculative Grade		4.7	9.7	14.5	18.7	22.3	25.6	28.4	30.9	33.1	35.1	36.9	38.6	40.2	41.8	43.4	44.7	45.9	47.0	48.3	49.2
All rated		1.9	3.8	5.6	7.2	8.5	9.6	10.6	11.5	12.2	12.9	13.5	14.1	14.7	15.3	15.9	16.4	17.0	17.6	18.2	18.7

Note:
*Data in percent.

Source:
Market available data.

APPENDIX C: CORPORATE CORRELATION

Code	Industry
1	Banks
2	Mining
3	General Retail
4	Travel & Leisure
5	General Finance
6	Educational
7	Life Insurance
8	Municipalities
9	Business Industrial
10	Healthcare Equipment & Services
11	Gas & Water
12	Household Goods
13	Recreational Services
14	Real Estate
15	Support Services
16	Industrial Engineering
17	Food Producers
18	Equity Investment Instruments
19	Industrial Transportation
20	Fixed Line Telecom
21	Sovereigns
22	Software & Computer Services
23	Chemicals
24	Mobile Telecom
25	General Industrials
26	Forestry and Paper

Note that ARC Ratings is not a legal, tax or financial adviser, and only provides a credit opinion of the rated securities. For example, a rating does not cover a potential change in laws nor can it be regarded as an audit. Moreover, ARC Ratings is not a party to the transaction documents. Users of our credit ratings should familiarise themselves with the transaction documents / mechanics and should form their own views in this respect. They should not rely on ARC Ratings for legal, tax or financial advice, and are encouraged to contact the relevant advisers.

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ARC Ratings is registered as a Credit Rating Agency with the European Securities and Markets Authority (ESMA), within the scope of the Regulation (EC) Nº 1060/2009 of the European Parliament and of the Council, of 16 September, and recognised as External Credit Assessment Institution (ECAI).

Ratings assigned by ARC Ratings represent opinions on the capacity and willingness of an entity to make all required payments on a given obligation in a timely manner.

The rating(s) assigned by ARC Ratings in this report was / were sought by the entity whose financial commitments are being rated.

Prior to the assignment or revision of a rating ARC Ratings provides to the entity whose financial commitments are being rated the documents that substantiate the rating to be attributed. This entity is thus given the opportunity to clarify or correct factual details, thus allowing the rating assigned to be as accurate as possible. The comments made by the entity whose financial commitments are being rated are taken into account by ARC Ratings in the assignment of the rating.

ARC Ratings, S.A. historical default rates are published in the European Securities and Markets Authority Central Repository (CEREP) which can be accessed on the website cerep.esma.europa.eu/cerep-web/. ARC Ratings default rate is the probability of lack of full and timely payment of capital or interest or of the occurrence of any event that explicitly indicates that the future full and timely payment of those commitments will not occur (e.g., in case of insolvency).

Ratings do not constitute a recommendation to buy or sell, but only one of the factors to be weighted by investors.

Throughout the entire period during which ratings are valid, ARC Ratings monitors the issuer's performance on a constant basis, and may even bring forward the date of the review unless stated as point in time. Hence, prior to an investor using a rating, ARC Ratings recommends that it be confirmed, namely by consulting the list of public ratings available on the website www.arcratings.com.

ARC Ratings' ratings are assigned based on information, which may include confidential information, collected from a wide group of sources, which may include the entity whose financial commitments are subject to rating. ARC Ratings uses and treats this information with due care and attention. Although all due care was taken in the collection, cross-checking and processing of the information for the purposes of the rating analysis, ARC Ratings cannot be held liable for its accuracy. ARC Ratings must make sure that the information has a minimum level of quality prior to assigning a rating based on such information.

In the rating process, ARC Ratings adopts procedures and methodologies aimed at ensuring transparency, credibility and independence, and also that rating classifications are not influenced by situations of conflict of interests. Any exceptions to these principles are disclosed by ARC Ratings together with the rating of the financial commitment in question.