Euler Hermes Rating GmbH

Project Rating
Methodology (Real Estate)

30 June 2017

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Introduction

Transparent presentation of rating methodology

No impact on existing Rating notations

Specification of general project rating methodology

Case-by-case assessments are an integral part of the methodology

Weighting of project risks and financial risks

The main purpose of this methodology for real estate project ratings (the "real estate project rating methodology") is to more transparently describe how Euler Hermes Rating GmbH (EHR) arrives at its real estate project ratings so that clients, investors and interested third parties can better understand which rating criteria are relevant and how they are combined into a final rating notation. The adoption and application of this methodology does not change any rating notations issued using the project rating methodology from March 2012.

This project rating methodology supplements the Basic Principles for Assigning Credit Ratings and Other Services and further specifies the general project rating methodology, which are available on our website. The real estate project rating methodology addresses all special purpose entities and project companies whose object of business is to hold (debt) financed real estate for what is generally an unlimited period of time. Typical projects include commercial properties and residential buildings. Issue ratings of financial instruments are also covered by the Issue Rating Methodology, which is also available on our website. The real estate rating methodology does not apply to the rating process for structured finance where the issue is backed by a pool of claims.

As with all of its rating methodologies, Euler Hermes Rating GmbH uses the following methodological principles as a guide for the rating process. However, the final rating decision in each case remains at the Rating Committee's discretion. Since each rating represents an opinion given by analysts and the rating agency, case-by-case evaluations and assessments are an integral part of the methodology. The real estate project rating methodology must also accommodate different project stages, property types and organisational structures in the case-by-case assessments. The methodology thus provides the framework for the analysis and is continuously being refined.

The rating methodology for real estate projects is organised into two major risk categories: project risk and financial risk. The following sections explain these areas of analysis and the individual rating drivers. They also describe how the drivers are weighted and combined into a final rating notation after factoring in rating modifications for project-specific operational risks and external factors. Appendix 1 lists all the rating drivers and shows how real estate project ratings are derived.

Project risk

Internal and external analyses as starting points for risk analysis The analysis of project risk relating to location risk starts with information provided by the issuer or affiliated service providers as well as internal and external market analyses. External information primarily consists of analyses, market reports, supplementary information or expert reports and information material supplied by economic institutes and trade associations. Analysts gather information on project structure, property risk and leasing risk from the project documentation, property walk-throughs and discussions with management.

Location risk

The location analysis considers fundamental conditions and changes in the market and competitive environment that may affect future trends, especially where they relate to the cash flows generated by a particular property. The analysis looks at location criteria that

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apply to the region as a whole (macrolocation) and to the project site's immediate surroundings (microlocation).

Macrolocation

Analysis of fundamental economic conditions and real estate market

The macrolocation's economic environment is closely evaluated in an analysis of fundamental economic conditions. The analysis focuses on quantitative indicators that provide clues as to expected future demand among tenants or buyers. However, EHR also analyses macroeconomic data, trends in the real estate market and the economic performance of specific industries of relevance to how the properties are used or who rents them.

Evaluation of structural environment and infrastructure

In addition, the macrolocation analysis looks at the site's structural environment with respect to population demographics, commercial structures, industry mix and the supraregional infrastructure, among other factors. It also assesses the broader regulatory environment, including construction law, landlord-tenant law, tax law and environmental protection regulations.

Impact of regulatory environment

Analyses generally examine the impact of the legal, political and technological environment on the real estate project's future performance as well. This includes medium- to long-term structural shifts that may necessitate significant changes to the real estate project.

High cyclicality and/or volatility in relevant industries – usually the tenants' industries – generally poses a higher risk to the earning power and cash flows of the property-owning company, thereby changing the requirements with regard to property quality, tenant structure and the financial flexibility of the real estate project.

Analysis of diversification

Identified risks may manifest themselves more strongly in regionally concentrated property portfolios than in regionally diversified ones. To account for this, the analysis considers project diversification as well, particularly with respect to the number of macrolocations in the portfolio.

Microlocation

There are more (sub-)markets to analyse when real estate projects consist of multiple individual properties at different locations or in different asset classes.

Analysis of location, infrastructure and competitive positioning The analysis of fundamental conditions at the microlocation covers factors such as property location, relevant local infrastructure and relevant competition. When comparing properties with competing real estate, analysts look not only at quantitative factors, but also – wherever possible – qualitative characteristics that represent competitive advantages or disadvantages, particularly concerning location, property specification and tenant mix. Qualitative differentiators that may significantly affect the property's market positioning are identified in this process.

Analysis of diversification

Identified risks may manifest themselves more strongly in regionally concentrated property portfolios than in regionally diversified ones. To account for this, the analysis considers project diversification as well, particularly with respect to the number of microlocations in the portfolio.



Property risk

Evaluation of property specifications

The analysis of property quality begins with the real estate project's fundamental objectives. Property quality depends largely on the property's specifications (e.g. construction or equipment quality, floor plans, etc.) and its state of maintenance. Property specifications are evaluated against the (future) needs of the property user or tenant. Criteria are also evaluated and checked for plausibility in light of expected market trends and the property's competitive position.

Plausibility assessment of property quality

The evaluation and plausibility assessment of property quality draws on sources such as discussions with the property's asset managers, owners and operators, if applicable. Analysts consult expertises of recognised valuers about the property's value and condition. They also generally inspect the property themselves to obtain a complete understanding of the project's quality.

Evaluation of diversification

Identified risks may manifest themselves more strongly in individual properties than in real estate portfolios. To account for this, the analysis considers project diversification as well, particularly with respect to the number of individual properties or different usage types.

Leasing risk

Tenant structure

Dependencies on individual tenants

The tenant structure analysis identifies the presence and extent of any dependencies on individual tenants or industries. The analysis evaluates the creditworthiness of any anchor tenants or sole tenants wherever possible. Analysts also assess lease structures, particularly with regard to the length of lease terms.

Real estate projects run the risk of having prices squeezed, particularly in response to pressure from tenants. This can occur when the property has a weak market position or when tenant concentration is high (e.g. due to anchor tenants). The analysis includes an assessment of the impact of these structures on the project's future performance.

Operators

Focus on the operationalisation of the project stakeholders

The real estate project may be exposed to significant risks from the property operator (for hotels, nursing homes or other properties run by specialised operators), its creditworthiness, its available resources or its operating contract with the owner. Available resources should be adapted to the size of the overall real estate project and adequate to sufficiently support the projected future development of the real estate project or portfolio. Analysts generally assess these risks on a project-by-project basis.



Weighting

Analyst-based weighting of sub-factors

To assess project risk, an EHR analyst assigns weights to three sub-factors: site risk, property risk and leasing risk. The weighting reflects the analyst's assessment of which factors will have the biggest impact on the real estate project's future performance. Once these subfactors have been weighted, project risk is assigned to one of five categories:



Financial risk

Analysis of the standalone and consolidated financial statements and the business plan The financial analysis generally relies on the issuer's planning / business plan and on the property-owning companies' audit reports (standalone and consolidated financial statements) from the past three to five financial years, assuming the property is already completed. Intra-year performance is evaluated based largely on monthly or quarterly reporting. Financial flexibility is assessed using a cash flow analysis, a current financing overview and a liquidity forecast. The project's initiators and/or owners also generally provide information on the financial plan as well as the assumptions underlying the plan. Analysts usually supplement the information with simulations and stress tests of their own.

Adjustment of the balance sheet and income statement Disclosures in the annual financial statements and the business plan are adjusted. The balance sheet adjustments focus on the correction of grooming transactions and the recoverability of reported assets. Income statement adjustments focus on the elimination of non-recurring income and expense items. Financial ratios are calculated through the cycle based on this information and assessed using EHR's internal ratio system.

Cash flow and earnings

Analysis of cash sources and uses

The cash flow analysis determines the sources and uses of cash flows in the project company's past and future periods based on a cash flow statement that classifies cash flows as operating, investing or financing cash flows.

The analysis looks at the following cash flow components:

Cash flow analysis Net cash from operating activities Net cash used in investing activities Free cash flow Net cash used in financing activities

The cash flow analysis, which is one component of the financial planning assessment, shows the potential impact of planned income and balance sheet policies on the real estate project's future cash flows.



Focus on the return on capital employed

EHR primarily assesses the issuer's (special purpose vehicle's) earning power using the return on capital employed (ROCE). In the financial planning assessment, it focuses on evaluating future revenue, income and expenses given the project's structure and the market's expected performance.

Capital structure and debt coverage

Assessment of the capital structure and interest and debt coverage ratios When evaluating the capital structure, EHR analyses the static capital structure as well as the dynamic debt to cash ratio. The ratio of economic capital to total assets and the ratio of economic capital to debt are particularly significant for the capital structure as well. This part of the assessment also considers the structure and recoverability of reported assets. The debt coverage analysis investigates the interest and debt coverage ratios among other factors.

The following ratios are important in evaluating the capital structure and debt:

Capital structure	Debt coverage	
Equity ratio	EBIT interest coverage ratio	
Loan-to-value (LTV) ratio	 Debt service coverage ratio (DSCR) 	

Implementation of possible corporate actions or capital expenditures The analysis of the future indebtedness is based on the financial plan. It considers the impacts of implementing corporate actions and capital expenditures and changing financial ratios. These developments must be consistent with the project structure.

Assessment of financial flexibility

Another criterion used to evaluate debt coverage is financial flexibility, which is considered after accounting for changes in liquidity during the year, assessing available lines of credit, and evaluating the diversification of financing partners through financial intermediaries and the capital market. Financial covenants and loan collateralisation play an important role in this process, too.

Assessment of refinancing risks

The debt coverage assessment also analyses the risks that may result from unsettled financing (e.g. refinancing) or interest rate changes.

Stress scenario analysis

Critical examination of key model parameters and derivation of stress scenarios In its extended analysis of financial risk, EHR usually draws up a rating case that defines ranges for various parameters based on certain assumptions, and analyses their impacts on the project's cash flows and debt coverage. In addition, EHR usually critically examines all key model parameters and assesses the impact of stress scenarios derived from them on cash flows and debt coverage.

The scenarios simulate variances in key income and expense categories such as diverging price trends or property vacancies. The primary purpose of this analysis is to measure and assess the sensitivity of project cash flows, focusing on different scenarios involving location, property or leasing risks such as changes in rents, vacancies or investment costs. EHR's assessment is generally based on conservative scenarios. Concrete break-even values are calculated in individual cases as well. Scenario analysis findings provide valuable insights into the stability and sustainability of the project's debt coverage.



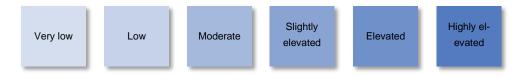
Key stress scenario analysis tools are:

Tools Market price scenarios, inflation, interest Demand scenarios Probability distributions/Monte Carlo simulation Break-even analysis Event risks and likelihoods of occurrence Combination of various stress scenarios

Weighting

Analyst-based weighting of categories

Financial risk is assessed based largely on the findings from the scenario analysis. The impacts on coverage ratios are usually given the highest weighting. Financial risk is classified into one of six categories:





Anchor rating

Weighting the risk profiles

The estimated project and financial risk is used to calculate the issuer's anchor rating. The anchor rating combines the project and financial risk to form a (sub-)rating. It does not consider possible operational risks or external factors.

EHR rating matrix

Asymmetrical weighting of project and financial risk

The anchor rating is a function of the categories previously assigned to the two risk profiles. The assigned financial risk category plays an outsize role in risk profile weighting. If the real estate project has an elevated financial risk, the financial risk profile will tend to dominate the anchor rating. If the financial risk is low, the project risk will gain significance. The weighting, in other words, is asymmetrical. That means that a project must have a strong financial risk profile in order to obtain an investment grade anchor rating. An elevated financial risk, on the other hand, generally produces an anchor rating that is below-average or even well below-average.

Project and financial risk profiles are weighted in the EHR rating matrix, which combines the two risk profile categories into a single anchor rating:

			Financ	ial risk			
*		Very low	Low	Moderate	Slightly ele- vated	Elevated	Highly ele- vated
Project risk	Very low	AAA / AA+	AA	A-	BBB-	BB-	B-
roje	Low	AA	A+	BBB+	BB+	B+	CCC
<u>.</u>	Moderate	AA-	А	BBB	ВВ	В	CCC-
	Slightly elevated	А	BBB+	BB+	BB-	B-	CC
	Highly elevated	BBB	BB+	BB-	В	CCC+	С

The matrix provides guidance for analysts. However, analysts may elect to depart from this procedure in specific, justified cases.



Stand-alone rating

Operational risks

Focus on project-specific structures and processes

Operational risks are identified and assessed separately from project and financial risks. They primarily relate to structures and processes that are specific to the project.



Assessment of project planning, construction and marketing risks

The presence of typical project planning, construction and marketing risks often results in a negative modification of the anchor rating. However, the modification may be reversed once the project has been completed on schedule and successfully started up. During the assessment, analysts pay close attention to measures taken to limit typical risks posed by construction cost overruns, delays, start-up problems and liquidity shortages during the construction period.

Assessment of management, corporate governance and organisation The company's management is assessed based on factors such as external stakeholders' qualifications and dependence on specific individuals. If necessary, corporate governance policies are assessed as well, with the assessment concentrating on interest, oversight and incentive structures and the ability of external stakeholders to obtain reliable information about the project's situation and progress. The analysis of the company's organisation focuses on transparency, efficiency, sustainability and manageability. Planning and management tools, for their part, are assessed for their ability – along with the risk management system – to give the project team a sound basis for making project management decisions.

Analysis of business processes The business process analysis focuses on the project stakeholders (asset management, technical management). It specifically assesses the capabilities of the contracted companies or individuals. The assessment of legal risks mainly considers risks from ongoing litigation or legal disputes.



Modification 1

Standalone rating as a modification of the anchor rating

Regarding the assessment of operational risks and the potential modification of the anchor rating, EHR initially assumes that the project managers have all their project-specific structures and processes under control or have taken adequate precautions to address any problems that may arise. For that reason, modifications generally have a negative effect. The extent of the modification is determined by analysts on a case-by-case basis and can result in a significant (negative) adjustment to the rating. In specific, justified cases, the modification may also result in a slight improvement of the standalone rating.

The result of the modification is the standalone rating, which provides an opinion about the project's independent rating.

Project rating

Public sector

Public sector impact

The creditworthiness of the project being rated may be affected by a public sector background.

If public sector entities hold qualified voting or control rights or make up the majority of the project's sponsors, analysts will conduct a review to determine whether the facts justify a rating modification. A distinction is made between direct / de jure control and indirect / de facto influence due to the project's significance. If de facto influence is found to exist, various criteria are evaluated to determine the probability and possibility of the public sector intervening temporarily if necessary.

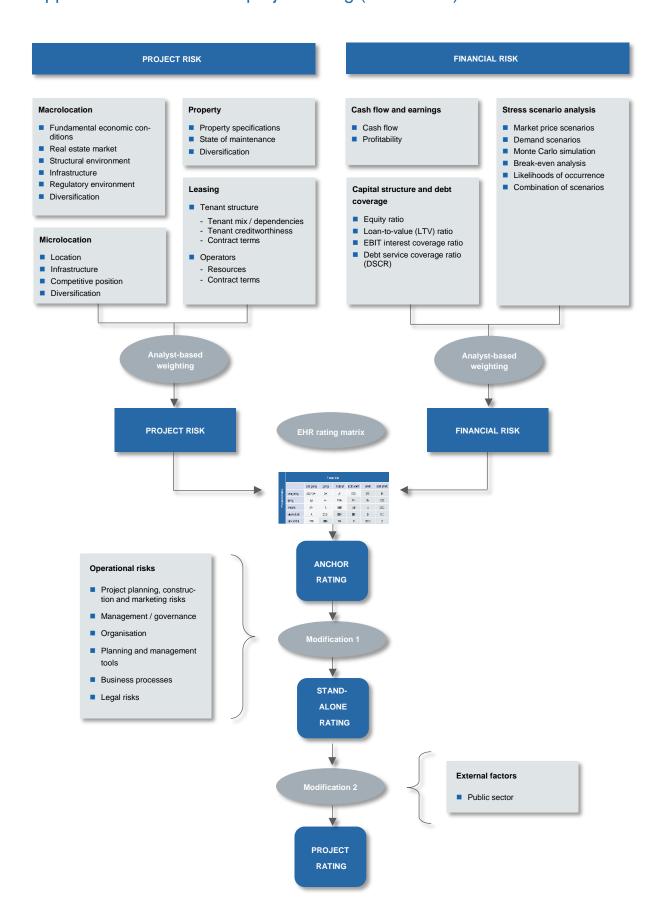
Modification 2

Project rating as the result of modifying the standalone rating The standalone rating is modified after possible external factors associated with public sector involvement have been evaluated. The modification can be positive or negative depending on the specific facts of the situation, including the public sector rating. The extent of the modification is generally determined by analysts on a case-by-case basis.

The result of Modification 2 is the project rating, which provides an opinion about the rating of the project and/or the special purpose vehicle for the project.



Appendix 1: Derivation of project rating (real estate)





Appendix 2: Definition of financial ratios

Earning power

EBITDA margin

EBITDA margin
Numerator
EBITDA
Denominator
Gross revenue for the period

Return ratios

E	Cash flow return on investment (cash flow RO
merator	Numerator
djusted operating profit (= EBIT)	EBITDA
Penominator	Denominator
Net debt + economic capital (= capital employed)	Adjusted total assets

Capital structure

Debt ratios

Equity ratio	
Numerator	
Adjusted equity (= economic capital)	
Denominator	
Adjusted total assets	

Leverage	
Numerator	
Net debt	
Denominator	
Net debt + economic capital (= capital employed)	

Loan-to-value ratio		
Numerator		
Net debt		
Denominator		
Current market value of property		



Deleveraging potential

Total liabilities / EBITDA
Numerator
Total capital - economic capital (= total liabilities)
Denominator
EBITDA

Net debt / EBITDA
Numerator
Net debt
Denominator
EBITDA

Interest and debt coverage ratios

EBIT interest coverage ratio
Numerator
Adjusted operating profit (= EBIT)
Denominator
Interest expense

EBITDA interest coverage ratio
Numerator
EBITDA
Denominator
Interest expense

Debt service coverage ratio	
Numerator	
Free cash flow	
Denominator	
Interest expense + payment of debt principal	

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