

European Real Estate Rating Methodology

Corporates

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1. Introduction

- [1] This methodology is the latest update of the 'European Real Estate Rating Methodology', which details Scope Ratings approach to rating real estate companies. This methodology supplements our [General Corporate Rating Methodology](#) and supersedes it in case of conflict, inconsistency or ambiguity. The different issuer-specific and rating-relevant characteristics laid out in this methodology must not be seen as a predetermined ranking or scorecard. We apply the underlying criteria in an opinion-driven way at the issuer level.
- [2] This year's update contains the following changes:
- i) Providing guidance on financial policy adjustments in relation to a property company's exposure to interest rate risk;
 - ii) Aligning the phrasing of the qualitative assessment of market share with the definitions from Scope's Credit Rating Definitions;
 - iii) Providing guidance on dimensions to assess contribution by region from a geographically diversified portfolio;
 - iv) Definition of capital expenditure for property companies;
 - v) Providing guidance on what constitutes a predictable sale of assets;
 - vi) Complementing capex coverage with a defined slotting;
 - vii) Providing guidance on the mechanics of the haircuts to be applied to sources of liquidity when assessing an issuer's liquidity profile;
 - viii) Providing further guidance on mechanics to build a view on minimum annual investments and minimum haircuts on property values (recovery analysis) linked to the carbon intensity of the portfolio;
 - ix) Providing typical information and data sources used in the analytical process;
 - x) Editorial changes.
- [3] The updated methodology is not expected to have an impact on outstanding ratings.

2. Scope of application

- [4] This methodology provides guidance on our ratings of European real estate corporates and may be selectively applied to non-European issuers if appropriate.
- [5] We define real estate corporates as companies which generate most of their total revenues and funds from operations (FFO) from rental income (i.e., real estate investment trusts¹), as well as the development or trading of real estate. The sectors in which real estate corporates operate include office, retail, residential, logistics, hospitality, healthcare, industrial and data centres. These sectors tend to be affected differently by the economic cycle.
- [6] Construction companies which derive most of their revenues from building activities, or companies which focus on real estate asset management or fund management, are not real estate corporates as defined by this methodology.
- [7] This methodology describes how we analyse the credit risk of real estate companies, which is based on our assessment of their business risk and financial risk profiles, complemented with an analysis of supplementary rating drivers.

¹ Please note: REIT status is not automatically beneficial for an issuer's business risk or financial risk profile as REIT regimes may differ depending on the jurisdiction.

3. The European real estate industry

- [8] The European real estate industry is highly fragmented. Market participants often have smaller market shares than those in more consolidated industries such as pharmaceuticals, tobacco and automotive.
- [9] Business models vary in this industry and mainly comprise letting, development, or a combination of both. Letting activity tends to generate relatively predictable rental income. In contrast, development activity (assets bought or developed to sell for a profit) generally leads to volatile cash flows and profitability that heavily depends on i) the number of development projects in the pipeline and their development phase; and ii) the stage of the economic cycle.
- [10] The real estate industry is capital-intensive, with significant investment needed to buy or maintain properties. Development and extensive refurbishment are integral activities for property companies. Many companies finance a large portion of their activities via debt and thus tend to have higher leverage than the average industrial company. However, this high leverage is often matched by stable asset values that can be realised easily.
- [11] Most market participants tend to operate in only a few countries and in certain regions, as local knowledge is essential to succeed.
- [12] If well-diversified by tenancy and geography, property companies focusing on letting tend to benefit from relatively stable and predictable cash flows, generally due to non-cancellable, long-term lease contracts. Property companies that primarily operate in development may also benefit from relatively stable and predictable cash flows if they have a full and balanced development pipeline, as well as high pre-letting and pre-sale rates.
- [13] Parameters which can qualify a property company for an investment grade rating are:
- a high percentage of cash flows derived from letting activities;
 - a strong market position;
 - wide geographic and tenant sector diversification;
 - long leases (triple-net) and a high-quality, granular tenant base;
 - a high and stable occupancy rate;
 - good-quality assets;
 - low leverage; and
 - high and stable debt protection.
- [14] Investment grade companies tend to benefit from predictable cash flows, solid profitability and strong credit metrics.
- [15] In contrast, among the indicators of a non-investment grade rating are a high percentage of cash flows derived from development activities, weak competitive positioning compared to international peers, weak geographical and tenant sector diversification, a high concentration of tenants and low asset quality. The cash flows of non-investment grade companies tend to be less predictable, and these companies often have volatile profitability and weaker credit metrics.
- [16] Property companies tend to have a regional focus and high cyclicity, which makes it challenging for them to achieve high investment grade ratings.

4. Information/Data sources

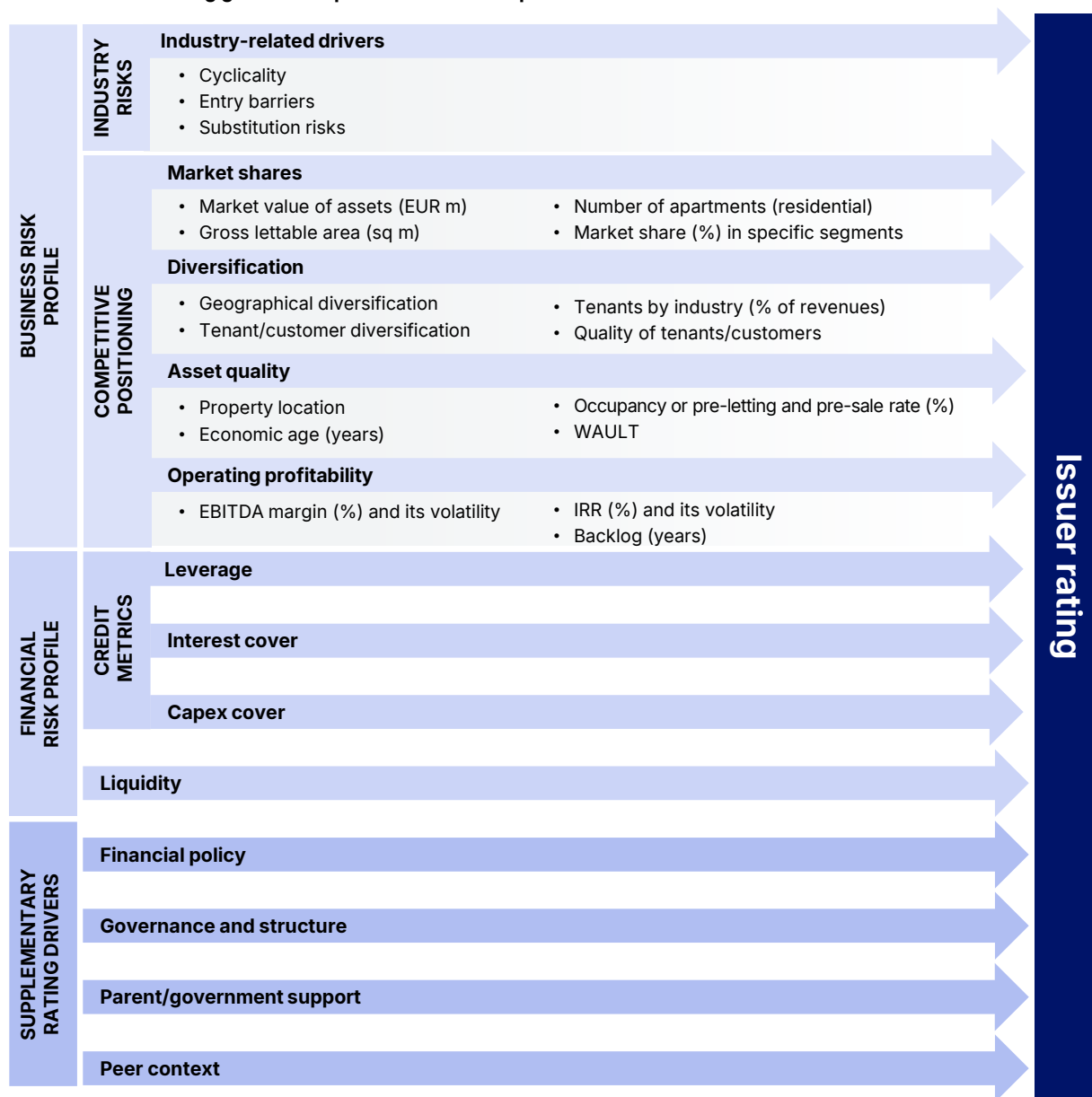
[17] In the analytical process Scope typically takes into account the following sources of information. Not all of the listed information will be considered for every rated entity. Moreover, Scope may consider additional sources of information if necessary.

- Audited financial statements
- Unaudited interim financials
- Press releases
- Presentations and information from conference calls/Capital Market Days
- Financial forecasts/budgeting of the rated entity, if available/accessible
- Research on the industry, rated entity and relevant jurisdictions
- Data from external data providers, e.g. consensus estimates, debt placements
- Management meeting (in case of issuer participation)
- Loan documentation, e.g. debt prospectuses, bank loan agreements
- Valuation reports from external assessors
- Scope internal data, e.g. spreading of historical financials and detailed forecasts for the next few years, peer group data, credit views on the captive finance business

5. Key Components

[18] We apply our rating methodology for European real estate companies as outlined in Figure 1. The rating analysis takes into account credit risk factors specific to this sector and addresses factors common to all industries such as management, liquidity, legal structure, governance and country risks which are explained in more detail in the [General Corporate Rating Methodology](#). The following business risk and financial risk indicators are non-exhaustive and may overlap; some may not apply to certain corporates. We may add issuer-specific rating factors, and a company's business model is decisive for the applicable indicators. No rating driver has a fixed weight in the assessment. Please refer to the [General Corporate Rating Methodology](#) for more detail.

Table 1: General rating grid on European real estate corporates



5.1 Business risk profile

[19] When evaluating the business risk profile, we analyse the industry dynamics and business drivers that are unique to European real estate companies. Our two-fold approach analyses the business risks for the industry and the competitive positioning of the company.

5.1.1 Industry-related drivers

[20] We assess the industry fundamentals of European Real Estate corporates by examining the following industry drivers:

- Cyclicalities
- Entry barriers
- Substitution risks

Cyclicalities

[21] The real estate industry often has more cyclical features than industries with inelastic demand, but these features vary greatly depending on the individual business model and the real estate sub-sector. We have identified three real estate sub-sectors:

- 1) Development (develop-to-hold and/or develop-to-sell)
- 2) Commercial (buy-and-hold) including all non-residential uses
- 3) Multifamily (buy-and-hold)

[22] Of the three sub-sectors, we believe development has the highest cyclicalities as the segment's demand is linked to economic growth. In addition, development companies mostly have a long time-to-delivery: three to four years are needed to develop a new property. During this time, letting and disposal risks could increase tremendously if demand declines because of an economic downturn or competition from new or existing stock. Developers are also exposed to construction risks, including those in relation to contractors, price fluctuations, technical defects and delivery delays.

[23] The risk around changing market conditions during the development period is a crucial element in our assessment of the cyclicalities of a developer's business model. We therefore distinguish between 'forward' and 'speculative' development volume. A higher share of forward sales and/or rentals is credit-positive because it increases visibility on future cash inflows and therefore partially mitigates the exposure to the underlying property market's cyclicalities.

[24] In general, commercial property companies face higher cyclicalities due to their exposure to industries that are vulnerable to changes in demand. Demand increases when the economy grows, while it declines in a downturn as weaker business conditions make tenant defaults more likely. However, these companies generally benefit from long-term lease contracts, which partially mitigates the impacts of economic downturns.

[25] The multifamily sector, in contrast, benefits from the lowest beta in the real estate sector, because demographic changes lag economic turmoil. However, cyclicalities are still higher for companies focusing on markets with long-term negative migration trends and a weak economic base.

Entry barriers

[26] We consider the real estate industry to have medium barriers to entry.

[27] Significant investment is needed to buy, maintain or develop properties, requiring either substantial internal resources or good access to third-party capital. Further, the diverse real estate regulations in Europe (especially in the multifamily sector) makes knowledge of local taxes and laws important. Technical know-how is also essential for almost the whole value chain, including the ability to perform technical due diligence before a property acquisition, as well as refurbishment and ongoing maintenance. Thus, property companies need to maintain in-house (or purchase external) know-how to remain up-to-date and/or expand into new markets.

[28] At the same time, entry barriers are lowered by the high industry fragmentation and generally good access to credit due to the collateral-eligible assets.

Substitution risk

[29] Substitution risk is generally low as properties, especially residential spaces, represent a basic human need.

- [30] However, we judge this risk to be higher for commercial property companies because demand could either: i) easily shift to spaces offered by competitors; or ii) decline as activities in physical locations (such as purchasing goods or working in an office building) may shift to e-commerce or virtual 'home' offices.
- [31] Substitution risk for developers depends on the property type. A developer's skills and reputation are essential to the development of made-to-measure projects and are not easily replicable. We therefore deem substitution risk to be medium. However, generic property design and development could be easily substituted by any existing competitor or new market entrant from other industries due to potential benefits from new infrastructure and/or more efficient processes.

Table 2: Our industry risk assessment on European real estate sub-segments

Cyclical Entry barriers	Low	Medium	High
High	CCC/B	1 B/BB	BB/BBB
Medium	B/BB	2 BB/BBB	BBB/A
Low	BB/BBB	3 BBB/A	A/AA

Source: Scope Ratings

- [32] We assess the industry risk profile for each sub-sector within the ranges in Table 2. The bold letters represent the most common indicative ratings in our analysis.
- [33] We assign the following industry risk levels, depending on certain factors (Table 2):
1. Development, B to BB: commercial real estate developers (industry risk: B) have high cyclical, medium entry barriers and medium substitution risk²; homebuilders (BB) are highly cyclical, have medium barriers to entry and benefit from low substitution risk as they address a basic human need.
 2. Commercial, BB: commercial property companies are exposed through their tenants to industries with average cyclical, mitigated in part by the mostly long-term rental contracts and the medium entry barriers. However, substitution risk is high as demand could easily shift or decline in the long term.
 3. Multifamily³, A: multifamily property companies benefit from low cyclical (determined by long-term migration trends), medium entry barriers and low substitution risk owing to their focus on a basic human need.
- [34] While the industry's exposure to the economic cycle is different for each sub-sector, the business risk profile is a key indicator of a real estate company's credit quality over time. The business risk profile indicates the extent to which competitive positioning, diversification and profitability, protect against adverse market movements and raise entry barriers for competitors. Thus, it provides a clear view of a company's long-term viability.

5.1.2 Competitive positioning

- [35] The competitive position of a property company is assessed through the following drivers:
- Market shares
 - Diversification
 - Asset quality
 - Operating profitability
- [36] All sub-elements of a property company's competitive position consider past performance and their potential future development, taking into account regulatory, macroeconomic and industry-specific developments.

Market shares

- [37] A real estate company's size and competitive positioning determine its market strength and ability to benefit from economies of scale. Large size often goes hand in hand with solid diversification in terms of geographies, sectors and tenants.

² Despite medium barriers to entry, we maintain a industry risk of B, despite medium entry barriers which according to our [General Corporate Rating Methodology](#) would require to use the value on the right, i.e. BB. This reflects our view that commercial property developers generally face only medium substitution risk, but that it is high for most companies in the sector as these are exposed to technological and market shifts, as they tend to specialise in just a few asset classes.

³ We may classify community service properties (e.g. elderly homes, hospitals, police stations and schools) in line with multifamily properties for the industry risk assessment as most benefit from low cyclical, medium entry barriers and low substitution risk.

- [38] A real estate company's competitive positioning is indicated by i) the market value of its assets; ii) the gross lettable area or number of apartments; and iii) its market share in specific segments.
- [39] An issuer may prepare financial reports using International Financial Reporting Standards (IFRS) or local generally accepted accounting principles (GAAP), depending on its jurisdiction and size. IFRS require assets to be measured using market value, while local GAAP may only require book value (purchase price less depreciation and impairments). To ensure data is comparable, we approximate the market value of properties held by an issuer. This can be based on i) the most recent⁴ property valuation from an accredited valuer; ii) a recent⁵ letter of intent; or iii) recent⁴ purchase offers/bids for the property. We apply discount factors depending on the reliability of the source that determined the market value. In the absence of the above information, we use undepreciated book value and apply necessary discounts.
- [40] Monetary values (which we measure as the market value of the assets in euros) are a direct function of local real estate prices and therefore do not capture differences in a company's market position vis-à-vis competitors operating in other regions. The same nominal euro amount may translate into a negligible exposure in a high-end market and vice versa. To ensure a holistic picture, we consider the gross lettable area for commercial real estate companies/developers, and the number of apartments under management/built for multifamily real estate companies or homebuilders.

Table 3: Market shares by rating category

Market position	AA and above	A	BBB	BB	B	CCC and below
Market value of assets (EUR m)	> 20,000	10,000 to 20,000	2,000 to 10,000	500 to 2,000	100 to 500	< 100
Gross lettable area (sq m) ⁶	> 10m	5m to 10m	1m to 5m	250,000 to 1m	50,000 to 250,000	< 50,000
No. of apartments (residential)	> 300,000	150,000 to 300,000	30,000 to 150,000	7,500 to 30,000	1,500 to 7,500	< 1,500
Market share (%) in specific segments	(Very) strong		Good	Moderate	(Very) weak	

Diversification

- [41] A real estate company's geographical, sector and tenant diversification levels indicate its ability to offset cash flow volatility arising from economic cycles, industry dynamics, regulatory changes or the loss of a single tenant.
- [42] We measure the geographical diversification of a property company as the percentage of revenues generated in a specific geographical region. A wide spread of activities across various geographical regions with different demand patterns or cyclical exposures, tends to reduce cash flow volatility, which we consider a positive rating factor. In our analysis, geographical regions are defined in line with the EU's NUTS 2 classification (Nomenclature of Territorial Units for Statistics) > [click here for the Eurostat definitions](#). We only consider regions where the issuer has sufficient exposure, either in terms of income contribution, floor space operated or number of properties. The relevance of each dimension depends on the business model of the property company.
- [43] Good diversification of tenants/customers is also a positive rating driver. For companies focusing on letting activities, the more diversified the tenant base and the better the tenants' credit quality, the lower the risk of a significant deterioration in cash flows if a tenant defaults or delays payment. We measure tenant diversification as the percentage of total revenues generated by the top three and top 10 tenants. We determine the certainty of future cash flows for developers by looking at the credit quality of tenants or buyers, if underwritten. For both B2B and B2C developers (develop-to-sell projects), we apply our diversification matrix with the same thresholds as for tenant diversification (units).
- [44] Solid sector diversification (measured by the percentage of revenues generated by a specific tenant's industry according to the Global Industry Classification Standard) is also a positive rating driver for a property company. Since the economic cycle affects sectors differently, spreading activities across various sectors tends to reduce cash flow volatility.

⁴ Not older than 12 months⁵ Not older than 3 months⁶ Applicable to all property types excl. residential (buy-, develop-to-hold and develop-to-sell) that is captured by no. of apartments

[45] We derive the credit quality of tenants based on publicly available credit ratings and/or reported impairments relative to gross rental income, which we use to form a view on the issuer's loss rate.

[46] For real estate companies that derive most of their revenue from development activity, we also consider client diversification, contractor diversification and the individual build-up of the development pipeline, as we believe that a phased setup provides the flexibility needed to achieve better control on the outflow of funds/value at risk.

Table 4: Diversification by rating category

Diversification	AA and above	A	BBB	BB	B	CCC and below
Geographical diversification	More than five regions; international presence		More than three regions; (inter)national presence	More than one region; national presence	One region; national presence	
Top 3 tenants (%)	< 2.5		2.5 to 5.0	5.0 to 10.0	10.0 to 20.0	> 20.0
Top 10 tenants (%)	< 10		10 to 20	20 to 50	50 to 100	< 10 tenants
Quality of tenants	Very strong	Strong	Good	Moderate	Weak	Very weak
Tenants by industry (%)	< 15		15 to 20	20 to 25	25 to 50	> 50

Asset quality

[47] The quality of a property company's assets determines the strength and stability of its operating cash flows and asset values throughout the economic cycle. A high-quality asset, such as a 'grade A' or 'core' building located in the central business district of an internationally significant city, tends to achieve higher occupancy rates, more stable cash flows, higher profitability and, therefore, less peak-to-trough price volatility compared to lower-quality assets. Furthermore, better-quality assets tend to be more liquid than those of lower quality and can thus be sold more easily.

[48] Our asset quality analysis covers five factors:

1. Property location: we differentiate between i) 'A' locations: cities of international or national importance, which tend to have large, viable real estate markets; ii) 'B' locations: large cities of national or regional significance; and iii) 'C' locations: cities with just regional significance (see Appendices 9.2 and 9.3 for office and residential/multifamily properties).
2. Economic age (in years) of the property portfolio: this is determined by the current physical condition of the properties and corresponds to the construction year or the year of the last major refurbishment. Older properties (older than 10 years) are generally less attractive for existing and potential tenants and linked with higher maintenance and operating expenses.
3. Financial occupancy rate for the property portfolio (in %): this is measured as the percentage of the contracted rent divided by the contracted rent plus the estimated rental value of the vacant space.
4. The weighted average unexpired lease term (WAULT) of the property portfolio (in years): a high WAULT translates into more predictable cash flows from rental income. We only consider the contractual lease term up to the earliest possible cancellation of the lease by the tenant. However, for multifamily property companies we use the weighted average lease length of the tenant portfolio to assess the stickiness of rental cash flow.
5. Pre-sale or pre-letting rate (%): This is relevant for development companies as we consider the quality of a development asset to directly relate to a developer's ability to sell or let it, before construction is complete.

- [49] In addition to factors such as a property's unique attributes (e.g. iconic design or special locations such as an airport city), development potential (e.g. below-market-rate leases or land available for development) may also have a positive or negative impact on our evaluation of asset quality.

Table 5: Asset quality by rating category

Asset quality	AA and above	A	BBB	BB	B	CCC and below
Property location	Mainly 'A' locations		'A' locations and 'B' locations	Mainly 'B' locations	'B' and 'C' locations	Mainly 'C' locations
Economic age (years)	< 5		5 to 10	10 to 15	15 to 25	> 25
Occupancy or pre-letting rate (%)	> 95		90 to 95	80 to 90	70 to 80	< 70
WAULT (years)	> 10.0	7.0 to 10.0	5.8 to 7.0	4.6 to 5.8	< 4.6	
Pre-sale rate (%)	> 110		100 to 110	80 to 100	< 80	

Operating profitability

- [50] We use the Scope-adjusted EBITDA margin (%) and levered internal rate of return (IRR) (%) to measure a property company's profitability and efficiency.
- [51] Revenues derived from rental income tend to provide recurring cash inflows. Hence, the higher the share of rental income in revenues, the lower the volatility of operating cash flow and profitability. Property companies with revenue mostly consisting of rental income can achieve Scope-adjusted EBITDA margins of up to 85%, while successful developers/homebuilders can achieve levered IRR's of up to 50% but these tend to be more volatile.
- [52] Property companies with a focus on commercial properties (buy-and-hold) tend to generate Scope-adjusted EBITDA margins of 50%-85%, while those focusing on multifamily properties generally achieve 50%-70%. The higher margins for the commercial sector are mainly driven by the higher portion of recoverable costs (triple-net leases) and economies of scale due to larger lot sizes. Even so, the granular customer base of multifamily properties tends to come with more stable profitability.
- [53] We assess the volatility of the Scope-adjusted EBITDA margin and levered IRR to determine the stability of a property company's internal financing. Low volatility in Scope-adjusted EBITDA margin and levered IRR are credit-positive.
- [54] We generally consider only the Scope-adjusted EBITDA margin when assessing real estate corporates that focus on buy-and-hold activities and generate most of their revenues from letting.
- [55] For real estate corporates that source most of their revenues from trading or development, we normally overweight the levered IRR.
- [56] We examine the existing backlog⁷ for a real estate corporate that sources most of its revenues from development, to form a view on its future revenue stability. A high backlog indicates a well-protected future top line.

Table 6: Operating profitability by rating category

Profitability	AA and above	A	BBB	BB	B	CCC and below
Scope-adjusted EBITDA margin (%) ⁸	> 90	75 to 90	60 to 75	45 to 60	30 to 45	< 30
Levered IRR (%) ⁹	> 50	36 to 50	23 to 36	9 to 23	0 to 9	Negative
Volatility	Low		Medium		High	
Backlog (years)	> 8	6 to 8	4 to 6	2 to 4	1 to 2	< 1

⁷ Future revenues secured for development activities in the form of pre-sale agreements yet to be recognised as revenue. These include a reservation on a home through the payment of a deposit. The ratio is defined as the backlog at a point in time (t) divided by annual sales to t.

⁸ Profitability metrics relevant for property company with a focus on buy-and-hold activity.

⁹ Profitability metrics relevant for property company with a focus on trading or development.

5.2 Financial risk profile

[57] In our assessment of a real estate company's financial risk profile, we focus on recent and forward-looking financial data. Key parameters include leverage, interest cover and cash flow. Liquidity is also assessed and is central to our analysis of non-investment grade issuers.

[58] The financial risk profile indicates a company's financial flexibility and viability in the short to medium term. A company with a strong financial risk profile is more likely to be resilient to economic downturns, adverse industry dynamics, unfavourable regulation or an unexpected loss of a revenue source. The ability to retain financial flexibility during an economic downturn is a rating driver for construction and construction materials companies as it indicates an ability to invest at all phases of the economic cycle.

5.2.1 Credit metrics

[59] Our assessment of credit metrics takes the following key ratios into account (see Appendix for definitions), divided thereafter into three categories:

Leverage:

Scope-adjusted loan/value ratio (%)

Scope-adjusted debt/EBITDA (x)

Interest cover:

Scope-adjusted EBITDA interest cover (x)

[60] Scope-adjusted loan/value ratio and Scope-adjusted EBITDA interest cover are assessed in conjunction with their potential sensitivity to changes in underlying market rates (capitalisation rates and borrowing costs).

Table 7: Financial measures by rating category

Credit metrics	AA and above	A	BBB	BB	B	CCC and below
Scope-adjusted loan/value ratio (%)	< 10	10 to 30	30 to 50	50 to 60	60 to 80	> 80
Scope-adjusted debt/EBITDA (x)	< 2.0	2.0 to 4.0	4.0 to 6.0	6.0 to 8.0	8.0 to 15.0	> 15.0
Scope-adjusted EBITDA interest cover* (x)	> 10.0	3.0 to 10.0	2.2 to 3.0	1.7 to 2.2	1.2 to 1.7	< 1.2
Scope-adjusted EBITDA interest cover** (x)	> 10.0	7.0 to 10.0	4.0 to 7.0	2.0 to 4.0	1.0 to 2.0	< 1.0
Capex coverage	Very high internal financing capacity with structurally very high positive free operating cash flow across the investment cycle	High internal financing capacity with structurally neutral-to-positive free operating cash flow across the investment cycle	Solid internal financing capacity with structurally neutral-to-lightly positive free operating cash flow across the investment cycle	Moderate dependence on external financing across the investment cycle	Strong dependence on external financing across the investment cycle	Very strong dependence on external financing across the investment cycle

* Thresholds applicable to buy-and-hold companies

** Thresholds applicable to real estate developers (residential/homebuilders and commercial)

Leverage

[61] Our analysis incorporates a property company's leverage, expressed as the Scope-adjusted loan/value ratio, determined by dividing Scope-adjusted debt by the market value of total assets (%) on a consolidated basis (or a proxy as defined under the market position assessment).

[62] If consolidated accounts are unavailable, we use a look-through loan/value ratio to approximate leverage. The look-through loan/value ratio reflects – as of any determination date – all financial liabilities adjusted by either the Scope-adjusted debt of the issuer's direct or indirect holdings (look-through indebtedness) or the market value of the issuer's direct or indirect holdings (combined asset value). We fully consolidate an equity holding if the issuer holds more than 50% of the shares of a company and the information provided is sufficient.

[63] We also assess the cash flow-adjusted leverage of a property company, measured as Scope-adjusted debt/EBITDA (x). Many property companies finance a large portion of their properties via debt and thus tend to have higher leverage than the average industrial company. However, this high leverage is often matched by high and stable asset values that can be realised easily. We note that aggressive growth in a property company's portfolio through acquisitions that is predominantly funded by debt can lead to an increase in Scope-adjusted debt/EBITDA that is slow to reverse, especially for buy-and-hold business models, given

the limited ability to grow cash flow at the same pace as debt. We generally capture such more aggressive financial policies in our assessment of supplementary rating drivers.

- [64] We generally place greater weight on the loan/value ratio for real estate corporates that focus on buy-and-hold activities and generate most revenues from letting. Still, we note that Scope-adjusted debt/EBITDA serves as an indicator of refinancing likelihood across the cycle. To capture refinancing risk, we consider the differential between the Scope-adjusted loan/value assessment and Scope-adjusted debt/EBITDA assessment. A differential of up to three notches will have no impact on the leverage assessment based on the Scope-adjusted loan/value ratio. A differential of more than three notches will result in a negative adjustment of at least one notch on the leverage assessment based on the Scope-adjusted loan/value ratio. High visibility of cash inflows (as indicated by the issuer's WAULT, which must be at least equivalent to a BBB-category assessment, or the stability of this ratio over the last few years), and outflows as exemplified by interest paid (as indicated by a very high proportion and appropriate duration of interest rate hedges), can partially mitigate a potential limited financing headroom.
- [65] For real estate corporates that source most of their revenues from trading or development, Scope-adjusted debt/EBITDA is generally weighted higher than the loan/value ratio in the assessment.

Interest cover

- [66] The interest cover of a buy-and-hold company tends to have low volatility as the financing is mostly long term and at fixed interest rates, while the income stream is typically subject to long term leases that have some downside protection due to their mostly regulated nature (multifamily) or contractual terms including upward-only clauses or CPI linked leases (commercial).
- [67] However, we note that a low level of interest rate risk hedging and/or a relatively short weighted average maturity profile could lead to significant swings in interest coverage if market borrowing costs change. We generally capture such more aggressive financial policies in our assessment of supplementary rating drivers.
- [68] For real estate developers, we generally consider interest cover thresholds as laid out in our [General Corporate Rating Methodology](#) to account for potential volatility in earnings and operating cash flow.

Capex coverage

- [69] We complement our analysis by looking at a property company's capex¹⁰ coverage through its internal (operational cash flow) and external financing capabilities (capital recycling and other sources of capital [72]) as property companies tend to be highly capital intensive. High levels of investment are required to refurbish or maintain properties in order to maintain asset quality and therefore attractiveness to tenants and investors, to comply with regulatory requirements and/or to adapt to changing market conditions. These investments are either covered by the property company's internal operating cash flows or require new debt and/or equity or asset rotation through the sale of selected assets.
- [70] For the avoidance of doubt, when considering asset rotation as a source of capex coverage, we only consider predictable proceeds from asset disposals. These typically include only signed sales for commercial property companies, sales in line with backlog for homebuilders and commercial real estate developers, and signed and projected sales - based on their respective track records (taking into account the low point within the last five years) - for multifamily property companies.
- [71] An investment-grade assessment a company is expected to fully fund its capex internally over time, while a company that is more likely to rely on external financing for an extended period of time is assessed non-investment grade
- [72] We also consider a property company's access to various sources of capital over the cycle, including common and preferred equity, unsecured bonds/bank debt, secured debt and/or joint ventures.

5.2.2 Liquidity

- [73] We perform a sector-specific assessment of a property company's liquidity when a special purpose vehicle holds its non-recourse debt. Our calculation of short-term debt for the liquidity assessment generally excludes non-recourse loans held by special purpose vehicles unless the property company is seen to be willing to support these loans. A property company's perceived willingness depends on the relative importance of the property(ies) held by an SPV to the company's cash generation, as well as the perceived impact on the company's reputation that a lack of support for these loans could represent.

¹⁰ Amounts spent on the completed (operational) investment property portfolio incl. expenditure used for creation of additional lettable area and enhancing existing space as well as amounts spent on investment properties under construction and related development projects.

- [74] Sources of liquidity¹¹ may be subject to haircuts in particular for issuers whose liquidity we judge to be vulnerable to unexpected impacts. Generally, non-investment grade rated companies are subject to these haircuts depending on the relative strength of their business risk profile and credit metrics. The stronger the individual, the less severe the haircut. Low or no haircuts on liquidity sources may be justified only if the property markets the company is exposed to show high liquidity, as evidenced by the latest transaction volume developments. This high liquidity supports the issuer's ability to sell assets and strengthen its liquidity position. Higher haircuts may result from the low liquidity of property markets in which the company operates.
- [75] For investment-grade real estate companies, we expect at least two years of liquidity coverage of unsecured debt, taking into account the level of unencumbered assets – with a lending headroom of up to 60% of the relevant fair value – that can provide access to secured financing to meet capital requirements.
- [76] For real estate corporates that source most of their revenues from trading or development, we typically use Scope-adjusted loan/value as an indicator for an issuer's access to external financing.
- [77] Our general assessment of liquidity is outlined in the [General Corporate Rating Methodology](#).

5.3 Supplementary rating drivers

5.3.1 Financial policy

- [78] Our assessment of financial policy as part of the supplementary rating drivers is described in the [General Corporate Rating Methodology](#).
- [79] As described above, we generally take into account a low level of interest rate hedging and/or a relatively short weighted average maturity profile.
- [80] The table below provides guidance on the notch-specific adjustment to a property company's standalone credit assessment due to financial policy concerns related to interest rate risk. We look at the proportion of debt that is exposed to a change in borrowing costs/underlying interest rates (debt that is either unhedged or hedged debt due for refinancing in the next 24 months) relative to an issuer's relative level of debt. The higher the relative level of debt and the higher the level of debt exposed to a change in borrowing costs, the more aggressive the issuer's financial policy and the more volatile the interest cover could be. To clarify, our assessment of the company's risk appetite for interest rate risk is forward-looking rather than based on a specific point in time. Additionally, we do not double-counting risks that are already incorporated into our assessment of the issuer's financial risk profile, such as our view on liquidity or credit metrics.

Table 8: Financial policy adjustments based on exposure to interest rate risk (notch adjustments)

%age of debt exposed to change in borrowing costs					
Leverage					
Scope-adjusted loan/value (%)					
< 30	< 45	45 to 60	60 to 75	75 to 90	> 90
< 30	0	0	0	0	-1
30 to 50	0	0	0	-1	-1
50 to 60	0	0	-1	-1	-2
60 to 80	0	-1	-1	-2	-2
> 80	-1	-1	-2	-2	-3

- [81] We also consider aggressive debt-driven organic or inorganic growth, in our assessment of a real estate company's financial policy. However, for the avoidance of doubt, financial policy adjustments are not limited to the factors mentioned before.

5.3.2 Governance and structure

- [82] Our assessment of governance and structure as part of the supplementary rating drivers is described in the [General Corporate Rating Methodology](#).

¹¹ Sources of liquidity include available & accessible cash, committed undrawn credit facilities, undrawn factoring lines, marketable securities, etc.

5.3.3 Parent/government support

- [83] Our assessment of parent support as part of the supplementary rating drivers is described in the [General Corporate Rating Methodology](#). When assessing parent support related to a government shareholder, we apply our [Government Related Entities Methodology](#).

5.3.4 Peer context

- [84] Our assessment of peer context as part of supplementary rating drivers is described in the [General Corporate Rating Methodology](#).

5.4 Environmental, social and governance (ESG) assessment

- [85] Credit-relevant environmental and social factors are implicitly captured in the rating process, while corporate governance is explicitly captured at the 'governance and structure' analytical stage (see 5.3.2).
- [86] The rating analysis focuses on credit quality and credit assessment drivers. An ESG factor is only credit-relevant when it has a discernible and material impact on the issuer's cash flow, and, by extension, its overall credit quality.
- [87] Examples include a change in regulatory environment, risk of stranded assets, and capex needs to meet energy-efficiency standards on property stock. We specifically look at the carbon intensity of an issuer's real estate portfolio, the issuer's decarbonisation plan (timetable and related capital expenditures, divestments, etc.) to support our view on mandatory capital expenditures, and on additional haircuts on investment properties and properties under construction for non-investment grade issuer debt ratings.
- [88] As a consequence, we complement the analysis by considering the investment required to achieve carbon neutrality by, e.g. 2050 for EU-based companies, regardless of the issuer's capital expenditure plan, as issuers may reduce spending due to cash constraints or limited access to external financing.
- [89] In order to demonstrate the financial impact (sustainable development of leverage) of such behaviour, we define a minimum level of investment. The minimum annual investment is based on the carbon intensity of the issuer's portfolio (kg CO₂e/sqm) and the average cost to achieve carbon neutrality, divided by the remaining time horizon (in years).
- [90] For the recovery analysis (high yield issues), the minimum haircut on property values must at least reflect the minimum loss in value associated with the carbon intensity of the portfolio, i.e. the net present value of the minimum annual investment.
- [91] Credit-relevant ESG factors can directly and indirectly affect all elements of the business risk profile, financial risk profile and supplementary rating drivers. This is in contrast to ESG ratings, which are largely based on quantitative scores on various rating dimensions.
- [92] The [General Corporate Rating Methodology](#) provides further detail on how ESG factors and supplementary rating drivers are incorporated in the credit analysis.

6. Issuer rating

- [93] The final issuer rating is based on our analysis of the business risk profile, financial risk profile and supplementary rating drivers. The rating committee decides on the relative importance of each rating driver. The business risk profile and financial risk profile are generally weighted equally for companies perceived as crossovers between investment grade and non-investment grade. The business risk profile is typically emphasised for investment-grade companies, while the financial risk profile is mostly the focus of ratings assigned to companies that are perceived as having high yield credit profiles. However, the latter also depends on the financial risk profile. Less focus is granted to strong financial risk profiles of companies showing a weak/vulnerable business risk profile (in the B or low BB category) since for such companies, the financial risk profile is subject to higher volatility. This takes into account that the credit rating of companies with business risks that reflect weak or moderate credit quality should not be bolstered by a temporary strong financial risk profile. Hence, the weighting between the business risk and financial risk profiles is adapted to each issuer's business model and market(s).

7. Corporate debt ratings

7.1 Long-term debt rating

- [94] Long-term debt instrument ratings reflect our opinion on an issuer's creditworthiness with respect to its long-term debt instruments. These ratings are determined by adjusting the issuer rating upwards or downwards. We use two approaches for

rating adjustments, depending on whether the issuer is rated BBB- or above (investment grade) or below BBB- (non-investment grade).

7.2 Debt instrument ratings for investment grade issuers

[95] We do not make a sector-specific assessment of debt instrument ratings for investment grade issuers. The assessment is described in the [General Corporate Rating Methodology](#).

7.3 Debt instrument ratings for non-investment grade issuers

[96] We perform a customised recovery analysis when rating the long-term debt instruments of non-investment grade issuers, assuming a hypothetical default situation. This analysis establishes the recovery rates of debt instruments based on the estimated value of claims available for creditors at the point of default (VCD), as well as the size and ranking of claims in the waterfall.

7.3.1 Estimated value of claims at default

[97] To determine the estimated value of claims at the VCD, we take the higher of i) the estimated enterprise value at default on a going-concern basis; and ii) the estimated enterprise value at default in a liquidation scenario (estimated liquidation value).

[98] We believe that liquidation is the most likely scenario for a property company in default. This view is driven by the asset-heavy balance sheet of most property companies as well as the relatively easy separation of properties from an issuer's operations.

[99] The liquidation value at default is estimated by adding the discounted values of the company's assets, assuming a similar asset structure to the one at default. The calculation may include assets such as investment properties, cash, accounts receivable, inventory, and property, plant and equipment.

[100] For investment properties and properties under construction, the discount to the book value is a function of the property's portfolio jurisdiction and incorporates market value declines, haircuts related to the carbon intensity of the portfolio, and liquidation costs.

Market value decline

[101] We use market value declines to capture the volatility of property prices in a specific jurisdiction. The market value decline is conditional on the highest achievable rating category for the debt class or issue, i.e. up to three notches or one rating category above the issuer rating.

[102] The applicable market value decline under a B rating category reflects the latest market value plus a volatility buffer equal to a standard deviation over a six-month period. The AAA level represents the highest stresses, reflecting a prolonged recession. AAA category stresses are typically based on a three-year downturn with nominal property prices falling at three times the level of their historical annual standard deviation (with a floor at the relevant market volatility). We may adjust the multiplier of the standard deviation in exceptional cases if volatility in the observation period differs significantly from average observations. Stresses between B and AAA are linearly interpolated. To assess the recovery of a debt class or debt instrument, we apply a maximum stress equivalent to a BBB level, the best achievable rating category for the debt class or issue of a non-investment grade issuer.

Liquidation costs

[103] We believe every (distressed) transaction will incur some liquidation costs. This is because, in most cases, third-party service providers will unwind the property company, notably to keep the business in operation until its assets are sold. Liquidation costs mainly represent the following:

1. Legal costs,
2. Notary costs,
3. Broker costs,
4. Real estate transfer tax
5. Special servicer

7.3.2 Unencumbered asset ratio

[104] To capture the structural subordination of senior or junior unsecured debt, we include the unencumbered asset ratio (unencumbered assets to unsecured debt) to determine the maximum rating adjustments for these debt classes. This is essential to assess the risk exposure for senior and junior unsecured debt holders. We believe that these debt classes should benefit from

an unencumbered pool of collateral because senior secured debt holders tend to accept high fire-sale discounts to pledged assets if they can secure the highest recovery possible for themselves. Thus, senior secured debt holders do not incorporate subordinated debt holders' claims in their assessment of 'acceptable' fire-sale discounts.

[105] We use the unencumbered asset ratio to determine the maximum adjustment between a debt class rating and an issuer rating. A non-investment grade issuer can achieve up to a BBB rating category for a debt class or issue. We do not provide specific thresholds for rating categories A and above.

Table 9: Unencumbered asset ratio

	AA and above	A	BBB	BB	B	CCC and below
Unencumbered asset ratio (x)	N/A	N/A	> 1.67	1.67 to 1.00	< 1.00	N/A

8. Additional methodology factors

[106] For more details on our rating Outlooks for corporate issuer ratings, long-term and short-term debt ratings, the recovery analysis see the [General Corporate Rating Methodology](#).

9. Appendix

9.1 Definition of financial items and key performance indicators applicable only to the real estate industry

[107] The General Corporate Rating Methodology defines in detail the indicators used in our financial risk profile assessments.

Scope-adjusted loan/value ratio (%) Debt measure <div style="text-align: center;"> <div>Scope-adjusted debt</div> <hr/> <div>Market value of total assets</div> </div>	<p>This ratio compares an issuer's debt payment obligations with the market value of its total assets (excluding cash and equivalents as well as the positive value of derivatives).</p>
Unencumbered asset ratio (%) Recovery assessment debt issuance <div style="text-align: center;"> <div>Unencumbered assets</div> <hr/> <div>Unsecured debt positions</div> </div>	<p>This ratio indicates the collateral available to unsecured debt holders.</p> <p>Unencumbered assets include all assets that have not been pledged to third parties as collateral including fully unencumbered investment properties, unencumbered net working capital, unencumbered financial investments and unrestricted cash and cash equivalents. Pledged properties with a loan/value ratio of below 60% are assessed as partly unencumbered. When determining the ratio, we use the asset value which corresponds to the difference between the actual loan/value ratio (including secured, undrawn committed credit lines) and the 60% threshold.</p>
Levered internal rate of return (IRR) (%) Profitability measure $0 = \sum \frac{Cash\ flow_t}{(1+IRR)^t} - (total\ development\ costs - total\ debt)$	<p>The weighted average levered IRR is used for comparable projects already completed by the issuer. The forecasted levered IRR is used for projects under development and the volatility of project-by-project profitability against the weighted average. This provides a holistic view of a developer's profitability.</p> <p>The levered IRR is calculated by comparing the total sales proceeds of a specific project with its total development costs. The levered IRR also considers related financing costs.</p>
Pre-letting rate (%) Asset quality <div style="text-align: center;"> <div>Contractually secured rental cash flow (annualised)</div> <hr/> <div>Estimated rental value for active developments¹² (annualised)</div> </div>	<p>This ratio determines a developer's pre-letting rate of its active developments and only applies to develop-to-hold developments.</p> <p>Contractually secured rental cash flow is the annualised rent payable by a third party under an executed lease agreement.</p> <p>Estimated rental value is the rent that a property can be reasonably expected to attain on the open market given its particular characteristics, condition, amenities, competitive position and location as well as local market conditions.</p>
Pre-sale rate (%) Asset quality <div style="text-align: center;"> <div>Contractually secured sales volume</div> <hr/> <div>Cost to complete active developments⁹</div> </div>	<p>This ratio determines a developer's coverage of outstanding investment or development costs and applies to develop-to-sell developments.</p> <p>The contractually secured sales volume is the sales volume underwritten by third parties.</p> <p>Outstanding development costs encompass the gross investment volume that has been underwritten by the developer, e.g. contractual obligations to third parties for a development project or obligations that inherently arise once construction work has started.</p>

¹² Active developments are developments for which the issuer has secured all licenses and permits and has started site preparation or construction.

9.2 Office market classification

	'A' locations	'B' locations	'C' locations
General considerations	Cities with international importance	Large cities of national and regional importance	Cities of predominantly regional importance
Stock of space	> 7 million sq m	> 2 million and < 7 million sq m	< 2 million sq m
Turnover rate	> 150,000 sq m	> 35,000 and < 150,000 sq m	< 35,000 sq m

9.3 Residential/multifamily market classification

	'A' locations	'B' locations	'C' locations
General considerations	Cities with international importance	Large cities of national and regional importance	Cities of predominantly regional importance
Population growth, last 10 years	> 2.50%	> -2.50% and < 2.50%	< -2.50%
Population growth, last three years	> 0.75%	> -0.75% and < 0,75%	< -0.75%

9.4 Illustrative foreclosure costs benchmark

Type of costs ¹³	Level of application	Timing of application/criteria	Indicative range as a percentage of
Legal costs	Collateral value	Post-foreclosing period/jurisdiction	1.0% to 2.5%
Notary costs	Collateral value		0.25% to 3%
Broker costs	Collateral value		0.25% to 6%
Real estate transfer taxes	Collateral value		1% to 12%
Special servicer	Collateral value/income		0.25% to 1.5%

¹³ Indicative range provided for a panel of six Western European countries.

9.5 Working examples recovery analysis

- [108] Example 1: Recovery allows for a 'BB-' issue rating, while the unencumbered asset ratio only supports a 'B' category rating
→ fictional issue rating: 'B+'
- [109] Recovery incorporating a market value decline equivalent to a 'BB' stress would justify a one-notch uplift for the issue rating ('BB-') compared to the issuer rating ('B+'). However, if the unencumbered asset ratio is below 1.0x, we believe that senior unsecured debt holders would not benefit from sufficient unencumbered collateral to grant an uplift to the issuer rating.

Simplified recovery calculation for senior unsecured debt (BB-category stress)

Fair value (encumbered assets)	100.0	Fair value (unencumbered asset)	100.0
J. Jurisdiction specific market value decline	35% 35.0	J. Jurisdiction specific market value decline	35% 35.0
= Stressed fair value (encumbered assets)	65.0	= Stressed fair value (unencumbered assets)	65.0
J. Foreclosure costs (as outlined under 6.4)	10% 6.5	J. Liquidation costs (as outlined in Figure 8)	10% 6.5
= Recovered amount after liquidation costs	58.5		
J. Secured debt	55.0		
(= Recovered amount after liquidation costs and secured debt	3.5	+ = Recovered amount after liquidation costs	58.5)
Secured debt (not recovered)	0.0		
= Amount available to address claims of senior unsecured debt holders			62.0
Secured debt (not recovered)	0.0	+ Senior unsecured debt	110.0 110.0
			= 56%
			RECOVERY
			Issuer rating B+
			Issue rating BB-

Calculation of unencumbered asset ratio

Encumbered assets	100.0
therof unencumbered portion	5.0
Secured debt	55.0
Unencumbered assets	100.0
+ Unencumbered portion of encumbered assets	5.0
= Total unencumbered assets	105.0
Senior unsecured debt	110.0
unencumbered asset ratio	
= 0.95x	

Maximum issue rating category B

[110] Example 2: Recovery allows for a 'B+' issue rating, while the unencumbered asset ratio supports the 'BB' category' → fictional issue rating: 'B+'

[111] A recovery incorporating a market value decline equivalent to a 'B' stress would be sufficiently high to justify a two-notch uplift for the issue rating ('BB') compared to the issuer rating ('B+'). The unencumbered asset ratio of above 1.0x would also justify an up-notching to 'BB-'. However, recovery incorporating a stress level commensurate with a 'BB' category market value decline would not qualify for an issue rating in the 'BB' category' (in this example a 'BB-'). Consequently, the maximum issue rating achievable would be a 'B+'.

Simplified recovery calculation for senior unsecured debt (B-category stress)

Fair value (encumbered assets)	100.0	Fair value (unencumbered asset)	100.0
J. Jurisdiction specific market value decline	25% 25.0	J. Jurisdiction specific market value decline	25% 25.0
= Stressed fair value (encumbered assets)	75.0	= Stressed fair value (unencumbered assets)	75.0
J. Foreclosure costs (as outlined under 6.4)	10% 7.5	J. Liquidation costs (as outlined in Figure 8)	10% 7.5
= Recovered amount after liquidation costs	67.5		
J. Secured debt	85.0		
(= Recovered amount after liquidation costs and secured debt	0.0	+ = Recovered amount after liquidation costs	67.5)
Secured debt (not recovered)	17.5		
= Amount available to adress claims of senior unsecured debt holders			67.5
Secured debt (not recovered)	17.5	+ Senior unsecured debt	95.0 112.5
			RECOVERY
			= 71%
			Issuer rating B+
			Issue rating BB

Simplified recovery calculation for senior unsecured debt (BB-category stress)

Fair value (encumbered assets)	100.0	Fair value (unencumbered asset)	100.0
J. Jurisdiction specific market value decline	35% 35.0	J. Jurisdiction specific market value decline	35% 35.0
= Stressed fair value (encumbered assets)	65.0	= Stressed fair value (unencumbered assets)	65.0
J. Foreclosure costs (as outlined under 6.4)	10% 6.5	J. Liquidation costs (as outlined in Figure 8)	10% 6.5
= Recovered amount after liquidation costs	58.5		
J. Secured debt	85.0		
(= Recovered amount after liquidation costs and secured debt	0.0	+ = Recovered amount after liquidation costs	58.5)
Secured debt (not recovered)	26.5		
= Amount available to adress claims of senior unsecured debt holders			58.5
Secured debt (not recovered)	26.5	+ Senior unsecured debt	95.0 121.5
			RECOVERY
			= 48%
			Issuer rating B+
			Issue rating B+

Calculation of unencumbered asset ratio

Encumbered assets	100.0
therof unencumbered portion	0.0
Secured debt	85.0
Unencumbered assets	100.0
+ Unencumbered portion of encumbered assets	0.0
= Total unencumbered assets	
Senior unsecured debt	95.0
= 1.05x	

Maximum issue rating category **B**

[112] Example 3: Recovery allows for a 'BB-' issue rating; the unencumbered asset ratio supports the 'BB' category
→ fictional issue rating: 'BB-'

[113] A recovery incorporating a market value decline equivalent to a 'B' stress would be sufficiently high to justify a two-notch uplift for the issue rating ('BB') compared to the issuer rating ('B+'). Recovery incorporating a stress level commensurate with a 'BB-category' market value decline would also qualify for issue rating uplift ('BB-') from the issuer rating. As the unencumbered asset ratio, which is above 1.0x, would justify an up-notching to 'BB-', the maximum issue rating achievable would be a 'BB-'.

Simplified recovery calculation for senior unsecured debt (B-category stress)

Fair value (encumbered assets)	100.0	Fair value (unencumbered asset)	100.0
J. Jurisdiction specific market value decline	25% 25.0	J. Jurisdiction specific market value decline	25% 25.0
= Stressed fair value (encumbered assets)	75.0	= Stressed fair value (unencumbered assets)	75.0
J. Foreclosure costs (as outlined under 6.4)	10% 7.5	J. Liquidation costs (as outlined in Figure 8)	10% 7.5
= Recovered amount after liquidation costs	67.5		
J. Secured debt	55.0		
(= Recovered amount after liquidation costs and secured debt	12.5	= Recovered amount after liquidation costs	67.5)
Secured debt (not recovered)	0.0		
= Amount available to address claims of senior unsecured debt holders			80.0
Secured debt (not recovered)	0.0	Senior unsecured debt	95.0
			95.0
			RECOVERY = 84%
			Issuer rating B+
			Issue rating BB

Simplified recovery calculation for senior unsecured debt (BB-category stress)

Fair value (encumbered assets)	100.0	Fair value (unencumbered asset)	100.0
J. Jurisdiction specific market value decline	35% 35.0	J. Jurisdiction specific market value decline	35% 35.0
= Stressed fair value (encumbered assets)	65.0	= Stressed fair value (unencumbered assets)	65.0
J. Foreclosure costs (as outlined under 6.4)	10% 6.5	J. Liquidation costs (as outlined in Figure 8)	10% 6.5
= Recovered amount after liquidation costs	58.5		
J. Secured debt	55.0		
(= Recovered amount after liquidation costs and secured debt	3.5	= Recovered amount after liquidation costs	58.5)
Secured debt (not recovered)	0.0		
= Amount available to address claims of senior unsecured debt holders			62.0
Secured debt (not recovered)	0.0	Senior unsecured debt	95.0
			95.0
			RECOVERY = 65%
			Issuer rating B+
			Issue rating BB-

Calculation of unencumbered asset ratio

Encumbered assets	100.0
therof unencumbered portion	5.0
Secured debt	55.0
Unencumbered assets	100.0
+ Unencumbered portion of encumbered assets	5.0
= Total unencumbered assets	105.0
Senior unsecured debt	95.0
unencumbered asset ratio = 1.11x	

Maximum issue rating category B

9.6 Related documents

[114] For more information, please refer to the following documents:

- [General Corporate Rating Methodology](#)
- [Government Related Entities Rating Methodology](#)
- [Credit rating definitions](#)

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