vdp The German Pfandbrief Banks

Consideration of environmental risks in property valuation

1. Objective

The following paper was prepared by the vdp Working Group on Methodology[1] in consultation with the vdp Valuation Committee.[2] The objective is to examine the consideration of environmental risks (hereinafter referred to as e-risks) in property valuation.

Sustainability risks (known as ESG risks) include e-risks, but also social risks such as lack of safety at work and human rights violations, as well as governance risks such as corruption and tax fraud.

From the vdp's point of view, environmental risks are particularly important for property valuation. In contrast, social and governance risks play a rather subordinate role and mainly relate to the corporate level. They are not currently the focus of discussions with the supervisory authorities in the context of property-related valuation. This paper therefore concentrates on e-risks and the following topics:

[1] vdp-Arbeitskreis Methodik
[2] Ausschuss für Bewertungsfragen

- The role of the property valuer and the distinction from other areas of responsibility such as risk management and lending;
- Summary of the main property-related risks relevant to the property valuation;
- Ways in which e-risks can be adequately taken into account in market and mortgage lending values using standard procedures, methods and value concepts.

2. Relevant e-risks

The ECB states:

> *"Institutions should take climate and environmental risks into account when assessing collateral. Climate and environmental risks can affect the value of collateral. In this context, institutions should pay particular attention to the location and energy efficiency of commercial and residential properties. They should incorporate these considerations into both the process for determining the value of the collateral and the review process required by applicable regulations."*[3]

With regard to property valuation, two types of risk are therefore relevant that affect the property and may have an impact on pricing:

- **Transition risks**, in particular due to changes in legislation, regulations, technological progress or changing user preferences, for example:
  - energy-related building characteristics (energy efficiency, CO_2 emissions),
  - Expenses due to statutory retrofitting obligations (e.g. replacement of heating systems),
  - CO_2 costs remaining with the landlord.
- **Physical risks** (climate-related and environmental risks) based on the classification in the EU taxonomy[4] and in a study by the Umweltbundesamt[5]. Excerpt:

Temperature	Wind	Water	Solids
• Temperature change (air) • Temperature variability • Heat wave, heat stress • Cold spell/frost • Forest and wildfires	• Change in wind conditions • Storm (including snow, dust and sand storms) • Cyclones, hurricanes, typhoons • Tornado	• Changes in precipitation patterns and types (rain, hail, snow, ice) • Variability of precipitation or hydrology • Heavy precipitation (rain, hail, snow, ice) • Sea level rise • Flooding (river, coastal, ground flooding) • Storm surge • Drought, water stress, water scarcity • Coastal erosion	• Landslides • Avalanche • Soil degradation, soil erosion, soil subsidence, solifluction

[3] ECB Guide on climate-related risks – Supervisory expectations for risk management and disclosures, page 40 (expectation 8.3), November 2020
[4] Climate risks EU taxonomy (from Delegated Regulation 2021/2139, Annex I, Appendix A)
[5] Federal Environment Agency: Conducting a robust climate risk and vulnerability analysis in accordance with EU taxonomy – Recommendations for companies, as of 28 December 2022, page 29 ff. https://www.umweltbundesamt.de/publikationen/durchfuehrung-einer-robusten-klimarisiko

3. The role of property valuation in the professional consideration of e-risks

ESG risks now play a major role in the internal processes of credit institutions. Regulators expect the materiality of the impact of ESG risks on financial risks to be systematically assessed and material risks to be adequately reflected in banks' internal risk management systems. In this context, European and national banking supervisors also expect relevant ESG risks to be taken into account in collateral values[6] .

Property valuers are proven experts when it comes to the specific property to be financed: they know the property with all its value-influencing characteristics and can assess how the relevant market currently prices individual characteristics. These include, for example, the location, the fixtures and fittings, the condition of the property, as well as the assessment of certain property-related e-risks and their possible influence on value.

3.1 The valuer's responsibilities

Valuers identify location-related physical and transition risks, prepare property-related analyses and document these in their reports. The scope and quality of this information has a significant impact on the work of risk management. The data, which may be determined on site by the valuers and entered into the bank's systems in standardised form, makes the analysis more meaningful and reduces the risk of incorrect control impulses.

The possible tasks of the expert can be summarised as follows:

- Evaluation and transparent presentation of the information deemed relevant for the respective valuation case in the report,
- Expert consideration of relevant e-risks in the corresponding valuation parameters, within the framework of the qualitative assessment (features, condition, marketability) and in the descriptive parts of the report (building description),
- Location analysis with regard to physical risks,
- Risk assessment/ property rating.

3.2 Tasks of other banking departments

As part of the lending process, it is the task of a financial institution to check the customer's ability to service the debt over the entire life of the loan and to take the value of the collateral into account when making the lending decision. To this end, a credit analysis of the customer is carried out. For medium-sized and larger customers, ESG scoring is also required in accordance with the EBA[7]. One of the tasks of an institution's risk management is to assess the short, medium and long-term effects of ESG risks on credit risk (and other financial risks) on an ongoing basis and under various future scenarios. Because the risk management is responsible for identifying, measuring and reporting risks, it is also responsible for risk models.

As part of the risk inventory process, the materiality of ESG risks is assessed according to specified standards. This includes determining the impact of physical and transition risks on the established risk types. Risk controlling requires object-related data such as energy perfor-

[6] EBA/GL/2020/06, page 47 ff., 7. Valuation of immovable property and movable assets, paragraph 208: "Where relevant, institutions should take into account ESG factors that affect the value of the collateral, such as the energy efficiency of buildings."

[7] EBA/GL/2020/06, page 35, Art. 146: They should assess the borrower's risks associated with ESG factors, in particular environmental factors and the impact on climate change, as well as the borrower's risk mitigation measures.

mance certificates, geolocation, natural hazard insurance or information on mitigating (structural) measures, which can be recorded on site by the valuers and ideally fed into the institutions' databases. Using this data, risk control determines the impact of ESG risks on the bank's risks for different time horizons at an aggregated level, with the help of appropriate climate models and scenarios and taking into account individual transformation plans of customers, such as an energy-efficient renovation project that is still a few years away.

The specific assessment of physical climate-related and environmental risks in terms of probabilities of occurrence and vulnerabilities, etc., as well as the analysis of financing implications, creditworthiness issues, coverability and the assessment of whether the property insurance cover for the identified risks is sufficient, is carried out in other areas of the bank outside the valuer's area of responsibility.

4. Reflection in market value and mortgage lending value

When assessing the potential impact of e-risks on value, **market evidence** must be examined in general and in the context of the market value determination as of the valuation date: Do certain location and property characteristics influence pricing on the property market and, if so, to what extent?

This market comparison is important for the risk analysis of the property. In this way, the valuer can assess whether the characteristics of a property are within the normal range for the market or whether the property is performing better or worse than the market average. Against the backdrop of the desired energy and heating transition in the building sector, the energy characteristics of buildings and the associated CO_2 emissions play a central role.

If an influence on value is evident, it is the responsibility of the valuer to assess this expertly and to present it transparently using the available methods and valuation parameters (see section 4.3).

4.1 Mortgage Lending Value

In contrast to the market value on the reporting date, the horizon for determining the mortgage lending value is long-term.

The mortgage lending value according to BelWertV is a long-term, sustainable, prudently determined value that is expected to be achievable over the entire life of the loan. Any foreseeable risks arising from the characteristics of the building, regulatory framework, structural changes and trends in the relevant market must be taken into account when determining the mortgage lending value.

Identify foreseeable trends and developments, refrain from speculation

Speculative assumptions, on the other hand, are expressly prohibited under § 3 (1) of the BelWertV: For example, a valuer cannot predict a CO_2 price that will apply in 20 years' time and reflect this accurately in the property value; nor can he accurately predict how increased requirements for energy efficiency in buildings will be enshrined in legislation in the future.

However, an assessment of the valuer is required to determine whether the property-specific energy characteristics could have a positive, negative or no impact on the marketability and Pfandbrief eligibility of the property being valued in the future. In particular, existing legal retrofitting obligations must be taken into account.

A potential influence on value can be reflected in various parameters in the standard valuation methods (see section 4.3).

4.2 Value definitions and legal basis

The existing value concepts and definitions are ideally suited for mapping e-risks. Market value determination in accordance with § 194 BauGB,[8] § 16 of Pfandbrief Act (PfandBG)[9] or internationally in accordance with the Red Book or IVS is a proven market standard. With regard to e-risks, the ImmoWertV, which specifies the BauGB, states in § 2 (3) No. 10 letter d) that the value-determining characteristics of land include *"the facilities and quality of the buildings, including their **energy** characteristics"*.

Market value assessment merely reflects market conditions. It is only appropriate to take e-risks into account in the value if the market actually assigns value relevance to these aspects.

For the determination of the mortgage lending value, § 16 Pfandbrief Act in conjunction with § 3 Mortgage Lending Value Regulation (BelWertV)[10] is established practice in the context of credit-based valuation. § 3 (2) BelWertV states that the mortgage lending value must be determined on the basis of a cautious valuation of the future saleability of the property, taking into account the **long-term, sustainable characteristics** of the property, normal regional market conditions and current and possible alternative uses.

Specific e-risks, such as the energy characteristics of a property that have a current and/ or future impact on its value, must therefore be taken into account as long-term, sustainable property characteristics.

No new value concepts should be invented

Demands for the introduction of further value concepts ("ESG market values" or similar) should be rejected for methodological reasons. The existing value concepts offer sufficient leeway for the transparent representation of e-risks (see section 4.3). After all, an E-risk is one of many parameters that can (potentially) influence value and, like other factors, can be adequately mapped within the framework of existing definitions and procedures.

Avoid mixing different value concepts

The mixing and merging of different value concepts, such as market value and mortgage lending value, into a so-called sustainable market value is to be rejected on methodological grounds. Market value reflects actual market conditions at a specific point in time (reporting date) between informed market participants in the ordinary course of business, while the mortgage lending value is a time-related, security-oriented value determined for lending purposes.

[8] Baugesetzbuch (BauGB)
[9] Pfandbriefgesetz (PfandBG)
[10] Beleihungswertermittlungsverordnung

4.3 Procedures and approaches for e-risks

With regard to the mapping of e-risks, a distinction must be made according to the valuation method chosen.

4.3.1 Income approach

For investment properties, the income approach is decisive and authoritative for determining value. The following parameters are suitable for mapping e-risks:

Market value	Mortgage lending value	Form of consideration
Land value	Land value (§ 15 BelWertV)	Any additions or deductions to the land value
Gross income	Sustainable rent (§ 10 BelWertV)	e.g. higher (sustainable) rents (monthly net rental value in EUR/sqm²) after energy-efficient renovation
Operating expenses	Imputed operating expenses (§ 11 BelWertV) • Maintenance • Loss of rental income risk • Other operating costs Modernisation risk	e.g. adjustment of maintenance costs (EUR/sqm²) depending on energy status e.g. inclusion of CO_2 surcharges remaining with the owner in other operating costs
Useful life	Useful life (§ 12 (2) in conjunction with Annex 2 BelWertV)	Choice of useful life depending on the energy efficiency of the building
Property interest rate[11]	Capitalisation rate (§ 12 in conjunction with Appendix 3 BelWertV)	Reflection of the property-specific risk by adjusting the interest rate

[11] Liegenschaftszinssatz

4.3.2 Cost value

The following parameters are suitable for mapping e-risks:

Market value	Mortgage lending value	Form of consideration
Land value	Land value (§ 15 BelWertV)	See above
Qualitative: Features	Qualitative: fixtures and fittings (§ 16 BelWertV)	Adequate classification
Age-related depreciation	Age-related depreciation (§ 17 BelWertV)	At the discretion of the remaining useful life
Real value factor (market adjustment)	Sustainability factor (§ 4 (2) BelWertV)	Market and appropriate classification

4.3.3 Comparative value

The following parameters are suitable for mapping e-risks:

Market value	Mortgage lending value	Form of consideration
Suitable comparable properties with comparable value-determining characteristics	Suitable comparable properties with comparable value-determining characteristics (§ 19 BelWertV)	Adequate classification

4.3.4 Consideration of special property-specific characteristics and other circumstances affecting value

Only if certain e-risks within the meaning of § 8 ImmoWertV have **not** already been taken into account in the above parameters may they be taken into account as so-called special property-specific characteristics[12] in the market value determination, regardless of the method chosen in accordance with ImmoWertV.

The same approach can be taken with regard to the mortgage lending value. Here, § 5 (3) sentence 2 of BelWertV provides for consideration within the procedure, namely that *"any loss in value to be expected over the course of time must be shown and must in particular be taken into consideration when measuring the modernisation risk (§ 11 (7) and the remaining useful economic life (§ 12 (2)).* This does not preclude reflection in other parameters (see sections 4.3.1 to 4.3.3).

[12] besondere objektspezifische Grundstücksmerkmale (boG)

Optionally, § 4 (3) BelWertV offers the possibility of recognising value-influencing e-risks **not** already taken into account elsewhere in the procedure by means of a separate deduction from the mortgage lending value. Double counting must be excluded.

4.3.5 Reflection of ESG risks in real estate market monitoring

In the opinion of the vdp, Article 208 (3) b) of the CRR III[13] does not imply any need to adjust the existing monitoring instruments, in particular the market fluctuation concept[14] of the German Banking Industry Committee[15] and the vdpResearch monitoring at postcode level: ESG risks priced in by the market are implicitly included in the market observation underlying the instruments.

4.4 Summary

As shown above, the existing value concepts, the standardised valuation procedures and the valuation parameters embedded in the procedures are well suited to adequately reflect environmental risks. Nevertheless, some market participants and parts of the supervisory authorities are calling for additional (flat-rate) discounts to be introduced outside the above-mentioned standardised procedures and the options mentioned in section 4.3, mostly in connection with the energy efficiency of buildings.

No new value definitions or additional haircuts should be established

There is no need for new value definitions or additional discounts: the established definitions for market value and mortgage lending value offer sufficient leeway and guidelines for taking into account the energy efficiency of buildings and other environmental risks.

Key factor: market evidence

Property valuation is based on estimates and comparisons, on the assessment of the characteristics of the individual property and regional market conditions. Market evidence remains central: the reflection of energy characteristics and physical risks (e.g. location in a flood zone) in the price varies depending on the market, property type and individual case. For example, the poor energy efficiency class of a residential property in a prosperous city with a shortage of housing will be priced differently by the market than in a structurally weak, rural area with high vacancy rates.

No double counting

Additional (flat-rate) discounts therefore lead to double counting and incorrect conclusions.

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[13] *"b) where institutions have evidence that the property may have significantly declined in value relative to general market prices, the valuation shall be reviewed by an expert who has the necessary qualifications, skills and experience to carry out such a review and who is independent of the credit decision.* ***ESG-related considerations, including those related to restrictions imposed by relevant Union and Member State regulatory objectives and legal acts and, where relevant for internationally active institutions, by legal and regulatory objectives of third countries, shall be considered as an indication that the property may have suffered a significant decline in value relative to general market prices;*** *for loans exceeding EUR 3 million or 5% of the institution's own funds, the valuation shall be reviewed at least every three years by such an expert.*

[14] DK-Marktschwankungskonzept

[15] Deutsche Kreditwirtschaft (DK)