



CONFERÊNCIA **VALUATION 20** BRASIL 2024

HypZert-ESG Score - Real Estate

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Background



ESG (Environment, Social and Governance)

- Initiated by the Paris Climate Agreement 2015 and the UN climate protection goals
- Has been implemented in all areas of society in the meantime.

EU commits to the goals

- Among other things, channel capital flows into sustainable economic activities.
- With the so-called **taxonomy**, the EU 2020 has created a uniform European framework for the evaluation of economic activities with the aim of assessing the: **sustainable share of a given activity.**



ESG overview: Legal and regulatory requirements and market initiatives in the real estate sector



Legal framework	EU Taxonomy Regulation	EU Green Bond Standard (EUGBS; so far only draft)	Disclosure obligations Sustainable Finance Disclosure Regulation (SFDR)	Disclosure obligations Non-Financial Reporting Directive (NFRD)	Disclosure obligations Green asset ratio
	Rating BelWertV	Rating ImmoWertV	Disclosure obligations Art. 449a CRR	Disclosure obligations Corporate Sustainability Reporting Directive (CSRD)	Amendment to the Building Energy efficiency directive (EPBD; so far only draft)
	EU Taxonomy Regulation: vdp cooperation with Drees & Sommer, vdp cooperation with the German Sustainable Building Council (DGNB), ESG Circle of Real Estate	EU Green Bond Standard Minimum standards Green Pfandbrief, ICMA Green Bond Principles, EEMI & EEML	Disclosure obligations ESG Circle of Real Estate - ECOPE	EPBD: Building Research Establishment Environmental Assessment Method, German Sustainable Building Council Certification system, Leadership in Energy and Environmental Design	
Banking supervision	BaFin leaflet on dealing with sustainability risks	ECB guide on climate and environmental risks	ECB climate stress test	Network for Greening the Financial System (NGFS)	EBA Guidelines on Loan Origination and Monitoring
	K.A.R.L.	NATHAN/Climate Change Edition	msgGillardon	EPC estimator from HypZert	427 (in future Moody's ESG Solutions)



requirement

market initiative

Cosmos ESG – from the point of view of the valuer



ESG – in the context of real estate valuation in the financial sector



Conclusion from the perspective of real estate valuation

- Valuation models and rating systems only indirectly take ESG criteria into account.
- Conclusions about sustainability are not clearly possible.

→ **Essential for risk assessment:**
- **Transparent presentation and**
- **comprehensible assessment**

Proposal from the perspective of real estate valuation

Independent scoring under the following premises:

- The focus is on the topic of environmental
- Social can only be limited and
- Governance cannot be assessed by the valuer

→ **Own model methodically based on the existing property and market rating of the vdp**

ESG – in the context of property valuation



Impact of sustainability criteria in the valuation

- **Rents** (rents will be increasingly influenced by sustainability criteria)
- **Operating costs/service charges** (e.g. maintenance, assumption of CO₂ price by tenant and landlord, ...)
- **Total/remaining useful life** (e.g. after energy efficiency improvements)
- **Property yield** (sustainability criteria will influence prices and therefore also the property yield)
- **Capitalisation rate** (e.g. business policy: possibly surcharge on yield due to insufficient sustainability)
- **Land value** (soil pollution, site status)

→ The application of the individual valuation parameters does not allow any conclusion to be drawn as to the extent to which the final result of the valuation is influenced by sustainability criteria.

→ It is not possible to draw conclusions about the sustainability of a property from the market and mortgage lending value.

ESG – in the context of real estate valuation



Requirement for ESG scoring methodology:

ESG scoring model with uniform definition

- » Assistance for institutes, clients and valuers without ESG (scoring) model. Application is not mandatory!
- » Necessary information is to be derived from other ESG standards if possible or can be used for this purpose
- » Neutral in terms of business policy (institution decides on the accepted risk level)
- » ESG scoring or a traffic light scoring for real estate based on a 6-level rating scale

- » Methodological alignment with the market and property rating with regard to:
 - **Max. 4 criteria groups** with qualitatively and quantitatively measurable criteria
 - **Weighting of the criteria groups** and the individual criteria within a group
 - **Uniformly defined measurement standards** for each criterion

Categorisation of sustainability criteria

The following **four criteria groups**, which allow for a comprehensive assessment of sustainability from the perspective of the valuer, were identified by HypZert after intensive discussion:



Environmental &
Climate Risks



Site



Building



Energy
Consumption

Criteria Group 1: Environmental & Climate Risks



Environmental &
Climate Risks

- Storm/tornado
- Storm surge
- Hail/heavy rain
- Flooding
- Emissions
- Volcanic eruptions (?)
- Earthquakes (?)

K.A.R.L.[®]
Köln.Assekuranz Risiko Lösungen

Criteria Group 2: Site



Site

- **Social infrastructure**
Day care centres, schools, local amenities, medical centres
- **Ecological infrastructure**
Green spaces, cycle paths, charging stations, car sharing schemes
- **Soil pollution**
Contaminated sites, use-related pollution
- **Site status**
Surfacing, previous use, biodiversity including green roofs

Criteria Group 3: Building



Building

- **Architecture**
Layout, room heights, flexibility, compactness (surface-to-volume ratio), lifespan
- **Type of construction**
Insulation, airtightness, building materials, recyclability
- **Interior fit-out**
Renewable energies, water consumption, heating
- **Economic efficiency**
Service charges, lifespan, maintenance
- **Third-party usability**
Sufficient demand, simple repurposing, resource-saving future use

Criteria Group 4: Energy Consumption



Energy
Consumption

= Primary energy demand of the building

- Specification in the energy demand certificate
- If applicable, final energy demand (stated in the consumption certificate) with conversion factors
- If necessary, calculation using the plausibility tool supplied by the Professional Group Energy & Environment

Scoring model design – Weighting (residential & office)



Criteria group 1: environmental impacts & climate risks	Valuation	Weighting
Storm/tornado		12,5 %
Flooding/storm surge		12,5 %
Hail/heavy rain		12,5 %
Emissions		12,5 %
Forest fire		12,5 %
Heat/drought, lightning strike		12,5 %
Earthquake/landslide		12,5 %
Mining damage/soil subsidence		12,5 %
Scoring for criteria group 1		
Criteria group 2: property	Valuation	Weighting
Social infrastructure		25 %
Ecological infrastructure		25 %
Soil pollution		20 %
Property situation		30 %
Scoring for criteria group 2		
Criteria group 3: building	Valuation	Weighting
Architecture		25 %
Construction method		30 %
Fit out		35 %
Third-party usability		10 %
Scoring for criteria group 3		
Criteria group 4: energy	Valuation	Weighting
Final energy demand/consumption		50 %
CO2 emissions		50 %
Scoring for criteria group 4		



Scoring result



Criteria group plots of land – Measurement standard: Social infrastructure (residential)



very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Very good to good connections to social and cultural facilities		Average connection to social and cultural facilities		Moderate to poor connection to social and cultural facilities	
<ul style="list-style-type: none"> Daycare centre, schools, local amenities and doctors are within walking distance (max. 20 min.). Cultural, sports and senior citizens' facilities are easily accessible by public transport or bicycle. 		<ul style="list-style-type: none"> Daycare centres, schools, local amenities and doctors are easily accessible by public transport or bicycle. Cultural, sports and senior citizens' facilities can be reached within 30 minutes by public transport. 		<ul style="list-style-type: none"> The daycare centre, schools, local amenities and doctors are more than 30 minutes away by public transport. Cultural, sports and senior citizens' facilities are more than 30 minutes away, even by private transport. 	

Criteria group plots of land – Measurement standard: Social infrastructure (office)



very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Very good to good connections to social facilities and service providers for short-term needs		Average connection to social facilities and service providers for short-term needs		Moderate to poor connections to social facilities and service providers for short-term needs	
<ul style="list-style-type: none"> Restaurants, local shops, service providers, doctors, a gym and a day care centre are all within walking distance (max. 10 minutes). 		<ul style="list-style-type: none"> Restaurants, local shops, service providers, a gym and daycare centre are easily accessible by public transport or bike. 		<ul style="list-style-type: none"> Restaurants, local shops, service providers, a gym and daycare centre are more than 30 minutes away by public transport. 	

Criteria group buildings – Measurement standard: Construction method (residential)



very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Environmentally friendly, resource-saving features of the construction method <ul style="list-style-type: none"> Blower door test results in air exchange rate < 3/h or < 1.5/h with ventilation system Insulation made from recycled materials, untreated natural fibres U-value from ENEV (1 February 2002) Easily recyclable materials that are easy to dispose of during their life cycle (untreated wood, steel, clay, natural fibres) Use of recycled concrete and plaster [DNSH5] No harmful substances 		Average to generally below-average characteristics of the construction method <ul style="list-style-type: none"> Blower door test results in an air exchange rate of 3 to 6/h Insulation with artificial mineral fibre (KMF) produced after 2000; polystyrene U-value in accordance with the Thermal Insulation Ordinance (from 1 November 1977) Recyclable materials (concrete, masonry) Harmful substances whose installation is permitted (wood-based materials containing formaldehyde labelled "E", parquet sealant containing solvents) 		Simple construction features that no longer meet today's requirements <ul style="list-style-type: none"> Blower door test results in air exchange rate > 6/h, interior unplastered masonry exterior walls Insulation with artificial mineral fibre (KMF) produced before 2000; missing insulation of the top storey ceiling or roof Composite building materials that are difficult or impossible to separate (external thermal insulation composite system) Pollutants whose installation is no longer permitted (PCB, lead, asbestos) 	

Criteria group buildings – Measurement standard: Construction method (office)



Building

very good	good	slightly above average	slightly below average	mediocre	poor
1	2	3	4	5	6
Environmentally friendly, resource-saving features of the construction method <ul style="list-style-type: none"> Blower door test results in air exchange rate < 3/h or < 1.5/h with ventilation system Insulation made from recycled materials, untreated natural fibres U-value from ENEV (1 February 2002) Easily recyclable materials that are easy to dispose of during their life cycle (untreated wood, steel, clay, natural fibres) Use of recycled concrete and plaster [DNSH5] No harmful substances [DNSH4] for new buildings: at least 70 % of the non-hazardous construction and demolition waste generated on the construction site must be reused or recycled 		Average to below-average characteristics of the construction method <ul style="list-style-type: none"> Blower door test results in an air exchange rate of 3 to 6/h Insulation with artificial mineral fibre (KMF) produced after 2000; polystyrene U-value in accordance with the Thermal Insulation Ordinance (from 1 November 1977) Recyclable materials (concrete, masonry) Harmful substances whose installation is permitted (wood-based materials containing formaldehyde labelled "E", parquet sealant containing solvents) 		Simple construction features that no longer meet today's requirements <ul style="list-style-type: none"> Blower door test results in air exchange rate > 6/h, interior unplastered masonry exterior walls Insulation with artificial mineral fibre (KMF) produced before 2000; missing insulation of the top storey ceiling or roof Composite building materials that are difficult or impossible to separate (external thermal insulation composite system) Pollutants whose installation is no longer permitted (PCB, lead, asbestos) 	

Criteria group energy consumption – Measurement standard: Energy (residential)



Energy consumption

	very good	good		slightly above average		slightly below average	mediocre	poor		Weight
Energy efficiency class *	A+	A	B	C	D	E	F	G	H	
Final energy (kWh/sqm/a)	<=30	>30 – 50	>50 – 75	>75 – 100	>100 – 130	>130 – 160	>160 – 200	>200 – 250	>250	50%
CO2 emissions (kg/sqm/a)	<=7,2	>7,2 – 12	>12 – 18	>18 – 24	>24 – 31,2	>31,2 – 38,4	>38,4 – 48	>48 – 60	>60	50%
	Good, long-term marketable energy quality and low CO2 emissions			Average energy quality and average CO2 emissions			Problematic energy quality and high CO2 emissions in the long term			
	* Classification Maximum value according to the German Building Energy Act (Gebäudeenergie-Gesetz)									
	** CO2 emission factor natural gas according to German Building Energy Act (Gebäudeenergie-Gesetz) 0.24 kg/kWh CO2 emissions (kg/sqm/a)									

Criteria group energy consumption – Measurement standard: Energy (office)



Energy consumption

	very good	good	slightly above average	slightly below average	mediocre	poor	Weight
Final energy (kWh/sqm/a)	<=75	>75 – 110	>110 – 150	>150 – 200	>200 – 275	>275	50%
CO2 emissions (kg/sqm/a)	<=25	>25 – 37	>37 – 50	>50 – 67	>67 – 92	>92	50%
	Good, long-term marketable energy quality and low CO2 emissions		Average energy quality and average CO2 emissions		Problematic energy quality and high CO2 emissions in the long term		

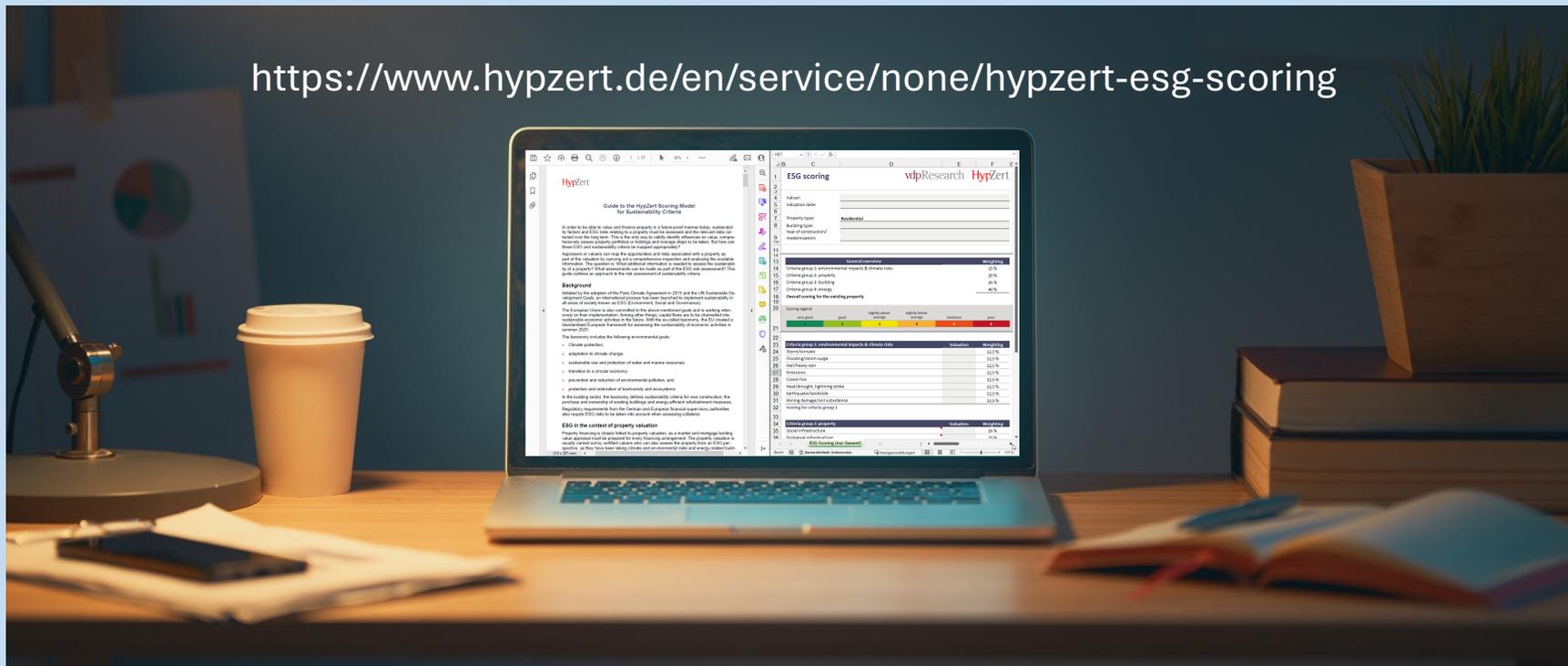
Energy Performance Certificate – Condominium



ESG & Scoring model for sustainability criteria: Guideline & Sheet



<https://www.hypzert.de/en/service/none/hypzert-esg-scoring>





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ANNEX

Legal framework with reference to ESG



Global and European environmental goals

- COP 21
- 17 SDGs
- European Green Deal
- EU Sustainable Finance Action Plan
- European Buildings Directive

Financial institutions

Valuation

ImmoWertV
BeiWertV
BauGB
BGB
JIT
GEIG
KSG
CO₂ tax

EU Taxonomy Regulation

Extended reporting and disclosure obligations

Banking supervisory/regulatory requirements (climate/environmental risks)
BaFin leaflet on dealing with sustainability risks
ECB Guideline on Climate and Environmental Risks
EBA Guidelines for Lending and Credit Supervision
7th MaRisk amendment

Source Graphic: H. Kolb

ESG – in the context of real estate valuation



ESG Scoring Model: Definition

ESG scoring is a standardised procedure that shows and quantifies the sustainable characteristics of a property, in particular taking into account the energy properties, the environmental and climate risks relevant to the location and the environmentally relevant impairments emanating from the property.

Properties in the sense of the definition are existing properties and, in the case of projects, ficticiously completed properties.

The yardstick is the current and future CO₂ emissions caused by the use of the property and the location on the reporting date and the degree to which the existing environmental targets have been met in accordance with the Taxonomy regulation.