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Property Value under Art. 229 CRR III

Methodological Implementation and Practical Application

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Regulatory Framework

The **"property value"** must be applied to new loans from January 1, 2025. The portfolio must be adjusted to this value concept by the end of 2027.

“Property value" is defined in Art. 229 (1) CRR III as follows:

"(b) the value is appraised using prudently conservative valuation criteria which meet all of the following requirements:

(i) the value excludes expectations on price increases;

(ii) the value is adjusted to take into account the potential for the current market value to be significantly above the value that would be sustainable over the life of the loan;"

Furthermore, the property value must not exceed the market value and must be transparent and clearly documented.

Positioning of the national supervisory authority dated 24 October 2024

Property value in accordance with Art. 229 (1) CRR

01

No new valuation concept

Based on proven valuation concepts: market value and mortgage lending value.

02

Mortgage lending value in accordance with BelWertV

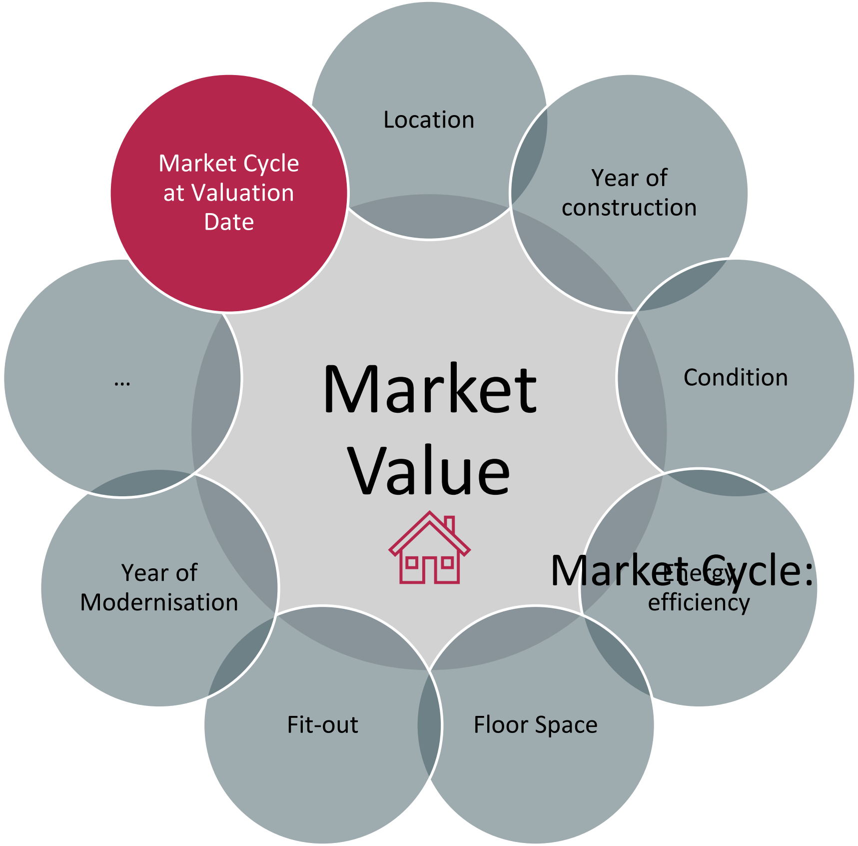
Meets the requirements of the new Article 229(1) CRR III.

03

Market value

Can no longer be used directly, but may need to be adjusted by a discount to meet the requirements of Article 229(1) CRR III.

vdp-Methodology



$$MV_t = f(x_1, x_2, \dots, x_K, y_t)$$

y_t

Real estate price time series

vdp-Methodology

Market value
Individual property

–

Adjustment

- based on statistical analysis
- Use relevant market data to determine whether current property prices/market values are above long-term trends

=

(Market value-based) property value
Individual property

Methodological challenges in deriving property values

- **Real estate markets are cyclical**
  - Cyclical real estate markets with exaggerations
  - Economic fluctuations overshadow fundamentals
  - Unsustainable performance must be identified
- **Methodological requirements**
  - Objective and comprehensible
  - Consistent application over time and markets
  - Practical feasibility
  - Scientifically proven

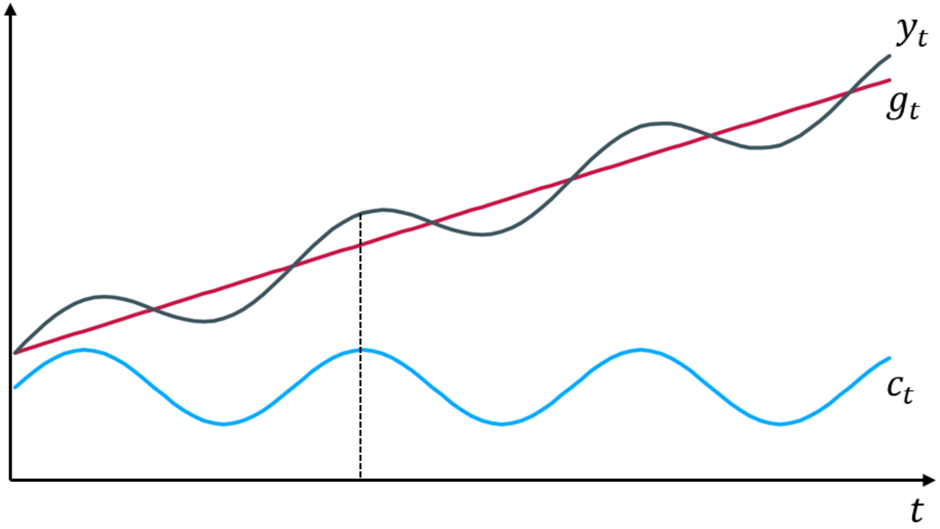
Trend – Cycle – Decomposition

Breakdown of Market :

$$y_t = g_t + c_t$$

Trend g_t : Long-term development

Cycle c_t : Short- to medium-term fluctuations



Determination of the trend component using the Hodrick-Prescott filter

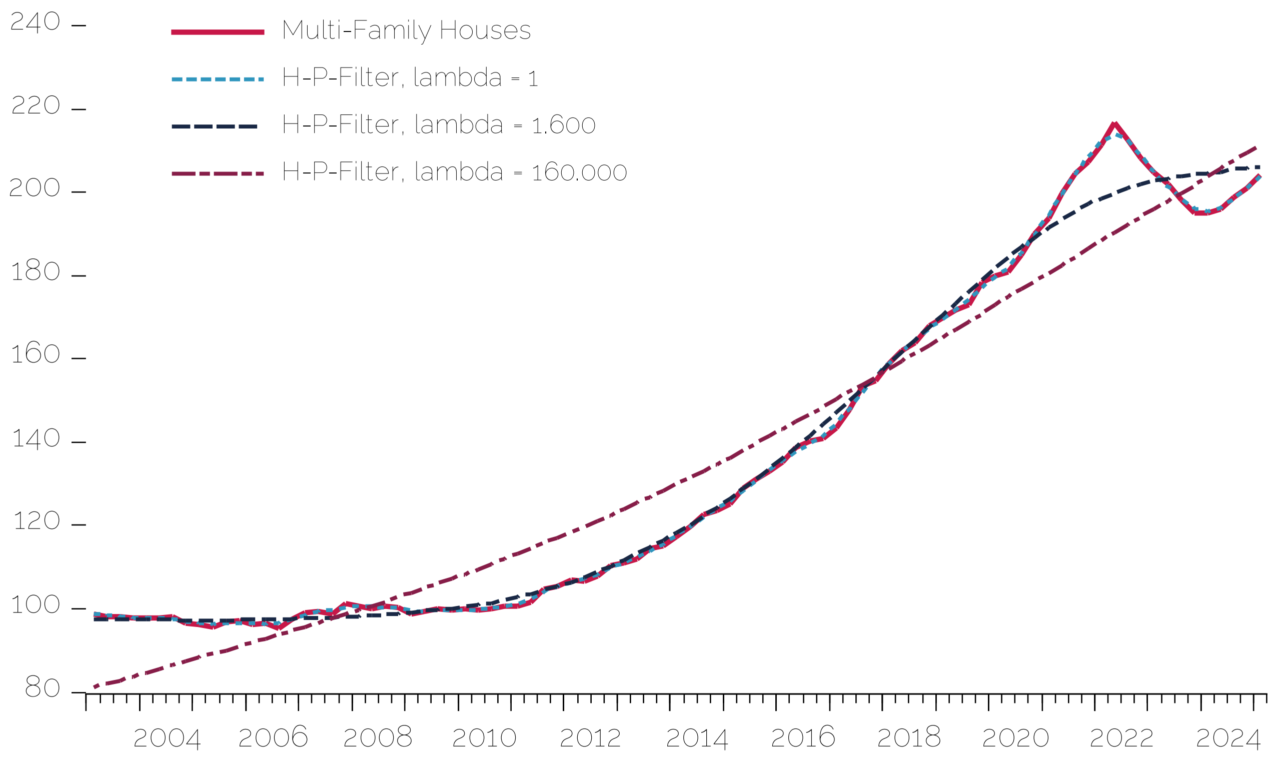
Minimisation problem for calculating the trend component of the Hodrick-Prescott filter (HP filter):

$$\min_{\{g_t\}_{t=0}^{T+1}} \sum_{t=1}^{T} \left[c_t^2 + \lambda[(g_{t+1} - g_t) - (g_t - g_{t-1})]^2\right]$$

mit $\quad c_t^2 = (y_t - g_t)^2$

- The first term describes the goodness of fit of the trend. The sum of the squared deviations from this should be minimal.
- The second term is responsible for the smoothness of the trend. To this end, the sum of the squares of the second difference of the trend is minimised. The degree of smoothing is determined by the λ coefficient.
- These two terms are opposites: goodness of fit vs. smoothness λ penalises excessive volatility in the trend, the higher λ the greater the weighting of fluctuations in the trend component in relation to the goodness of fit.

Effects of the smoothing parameter λ on the HP trend



Source: vdpResearch, own calculations

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Distribution of the HP filter in institutions

Institution	Publications on trends	Type of trend calculation method
International Monetary Fund (IMF)	regularly	HP filter(for production potential/output gap in the econometric model "MULTIMOD Mark III")
OECD	regularly	HP-Filter, PAT
Eurostat	regularly	Henderson filter, SEATS (both trend cycles)
EU Commission DG Economic and Financial Affairs	regularly	HP filter, structural time series models
European Central Bank	special investigations	HP-Filter
Bundesbank	regularly	HP filter, countercyclical capital buffer
Bank for international Settlements	special investigations	HP filter, countercyclical capital buffer

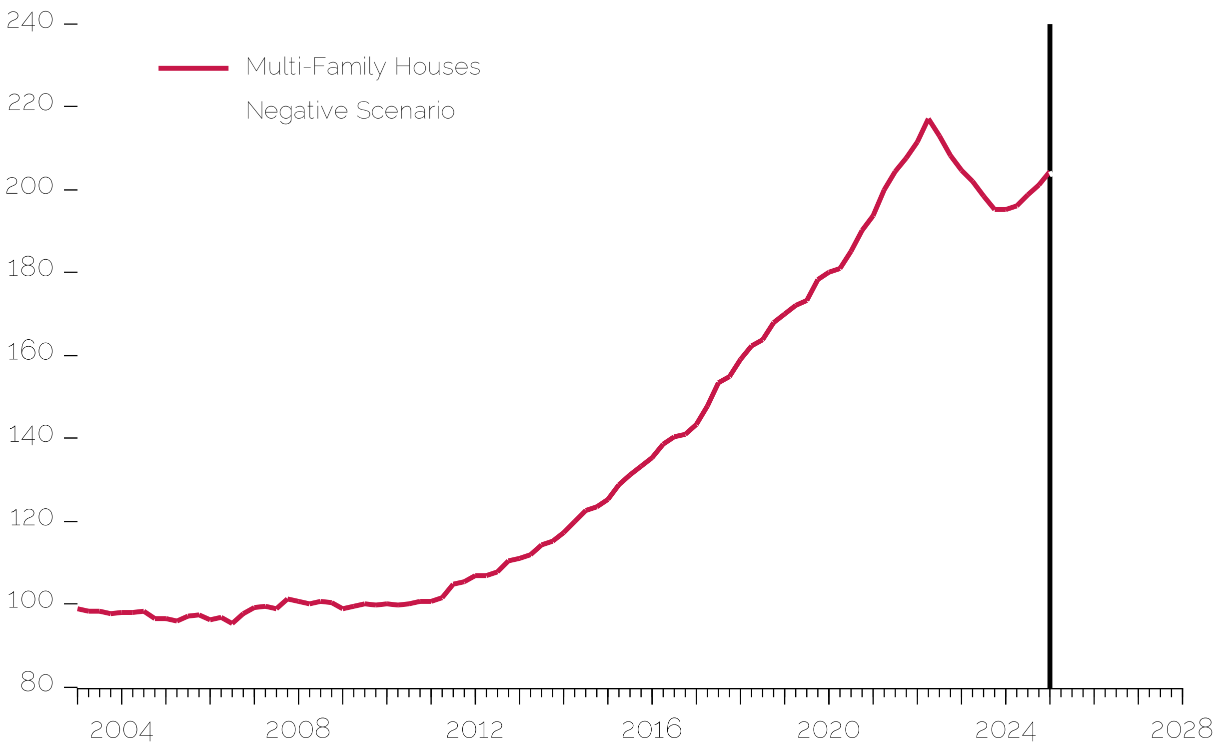
Source: Deutsche Bundesbank, Bank for international settlements

Introduction of a negative scenario

- **Methodological challenges**
  - HP filter weights are added to the current margin asymmetrically
  - Observations at the current margin are given a high weighting in the trend calculation.
  - Trend currently follows recent market developments too closely
  - Insufficient conservatism in dynamic price developments and subsequent downturns

- **Solution approach**
  - Extension of the time series to include a standardised negative scenario:
  - 20% price decline over 3 years
  - Even distribution
  - Based on **DK market fluctuation concept** of the German Banking Industry Committee
  - **Long-standing requirement communicated by** the national banking supervisory authority

Extension of the price index series for 2025Q1 to include the negative scenario



Source: vdpResearch

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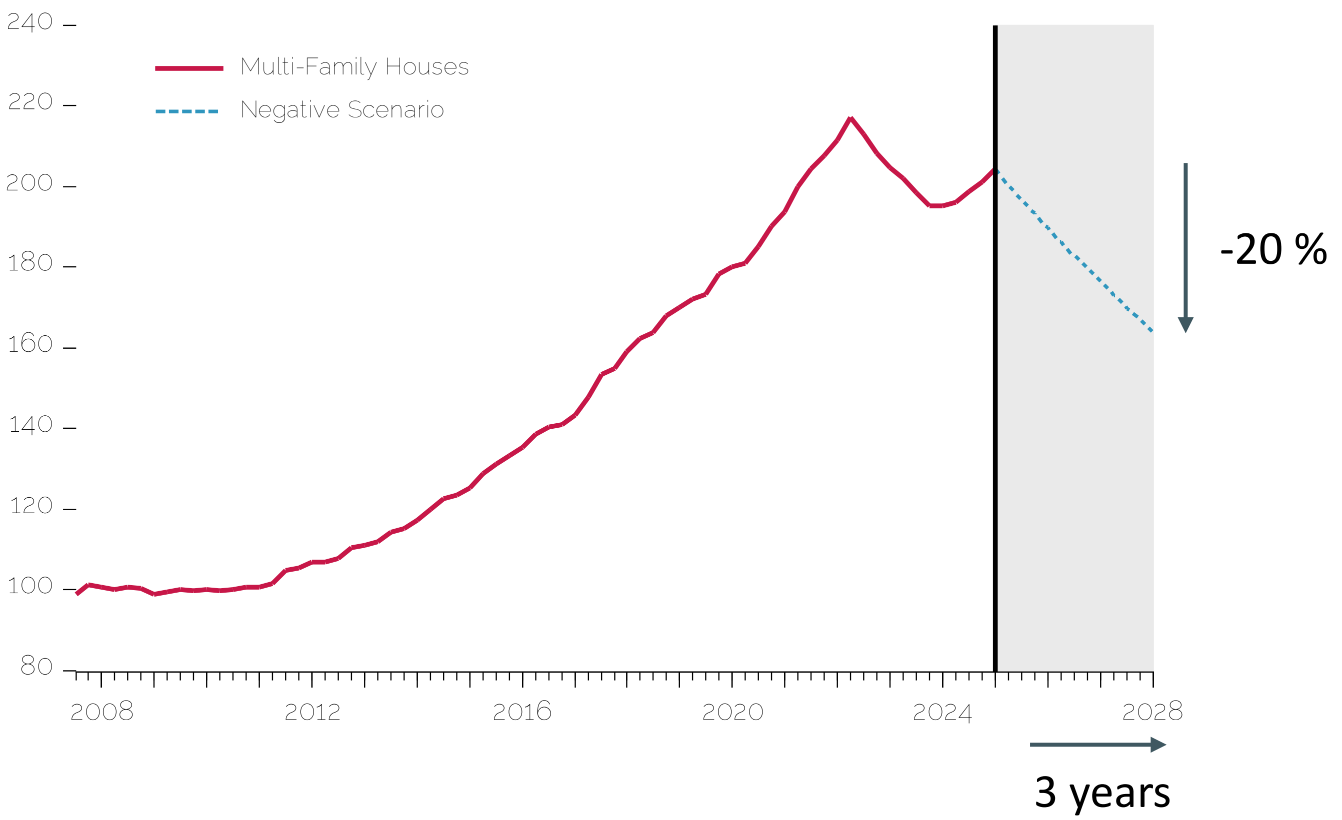
Extension of the price index series to include the negative scenario



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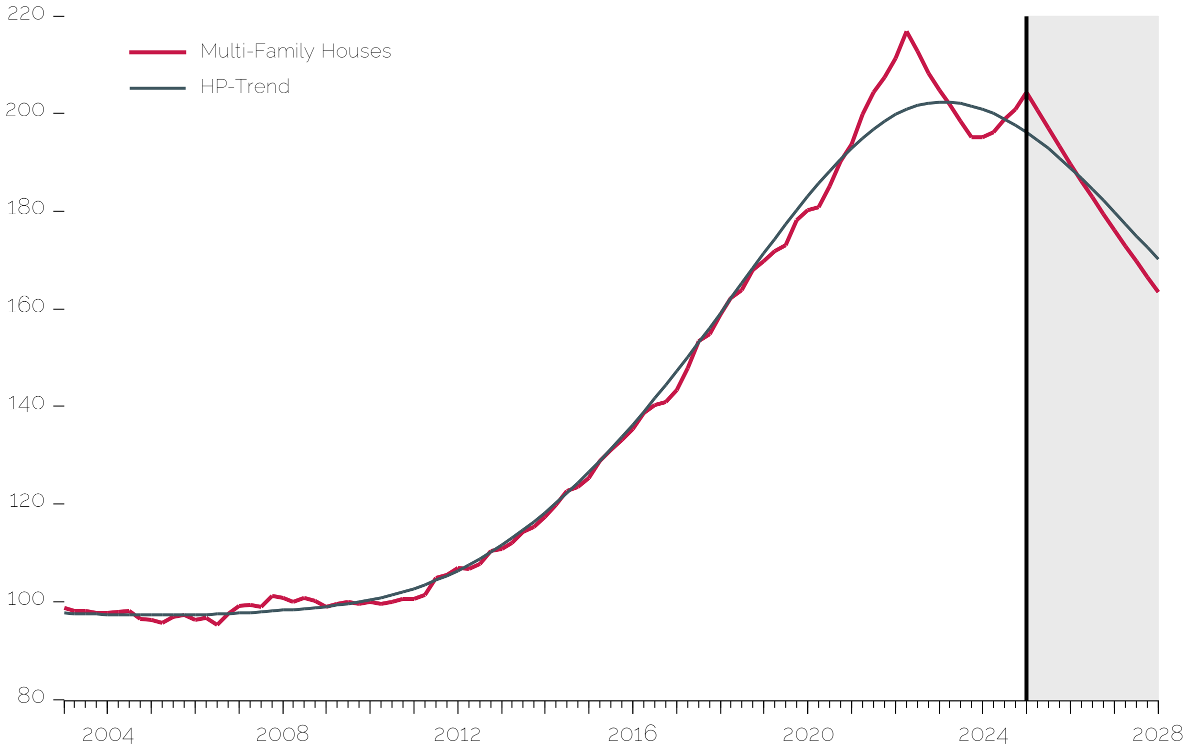
Calculation of the HP trend for 2025Q1 taking into account the negative scenario



Source: vdpResearch, own calculations

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Derivation of property value based on market value and deviation from long-term trend

If the **current** value of the price index y_t is above the **current** HP-Trend g_t , a discount equal to the relative deviation from the trend is calculated.

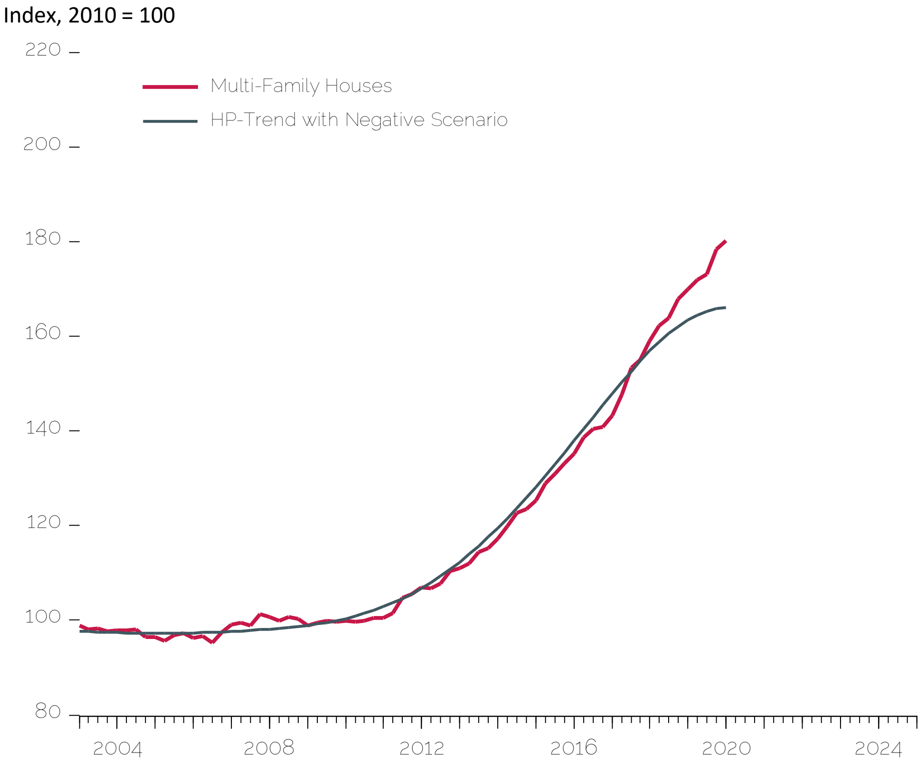
If $y_t > g_t$,then discount in %$= \frac{y_t - g_t}{g_t} \times 100,$

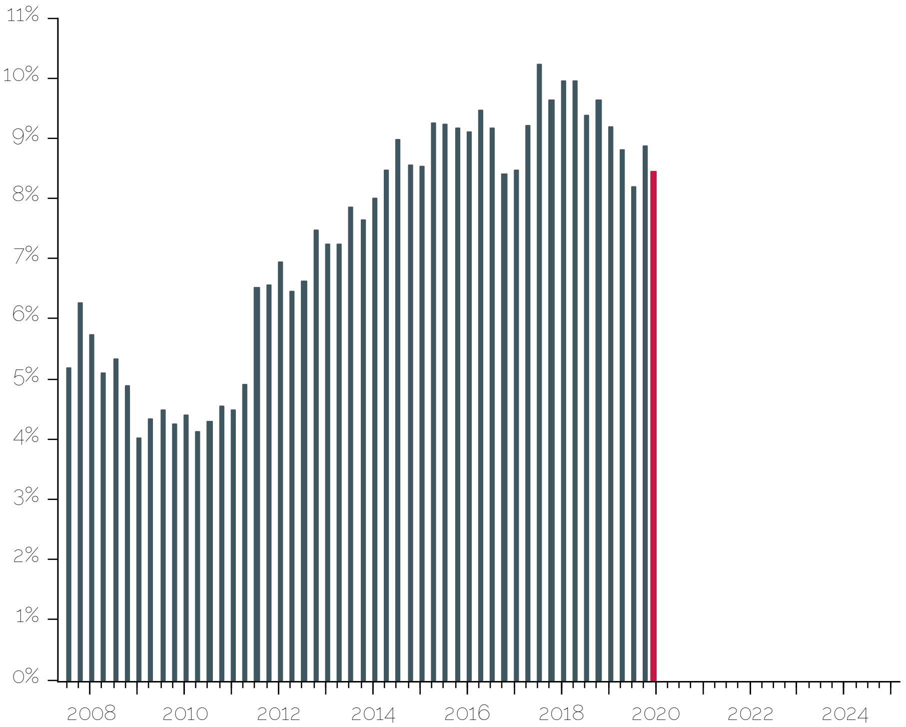
else if $y_t \leq g_t$,then no discount.

The property value (PV) is then calculated by multiplying the discount by the market value (MV).

$$\mathrm{PV}_t = MV_t \cdot \left(1 - \frac{y_t - g_t}{g_t}\right)$$

Market value-based discount in the first quarter of 2020





Source: vdpResearch, own calculations

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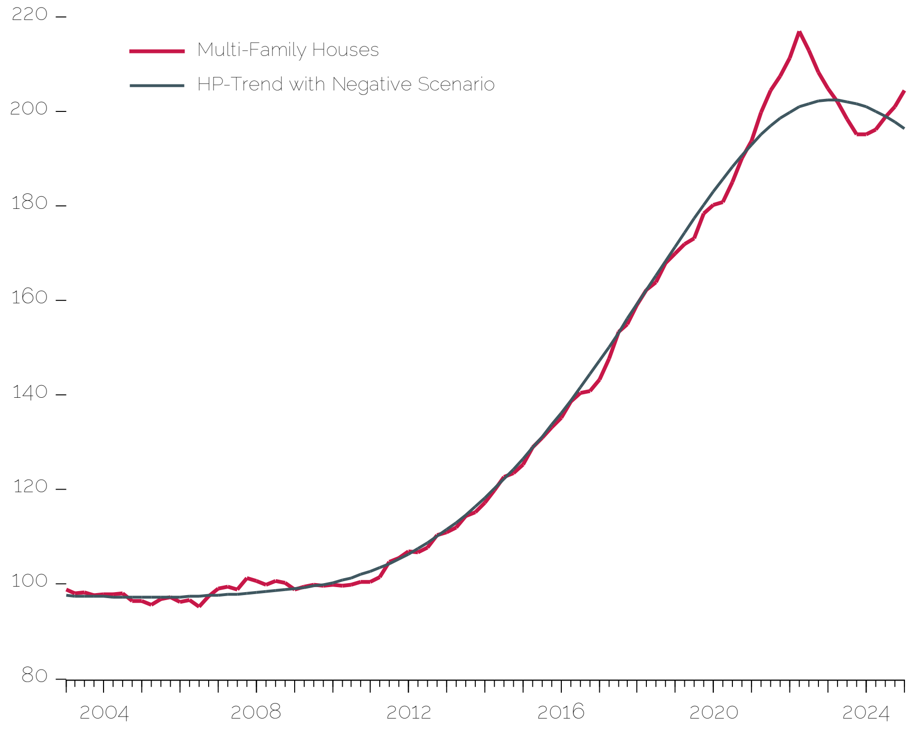
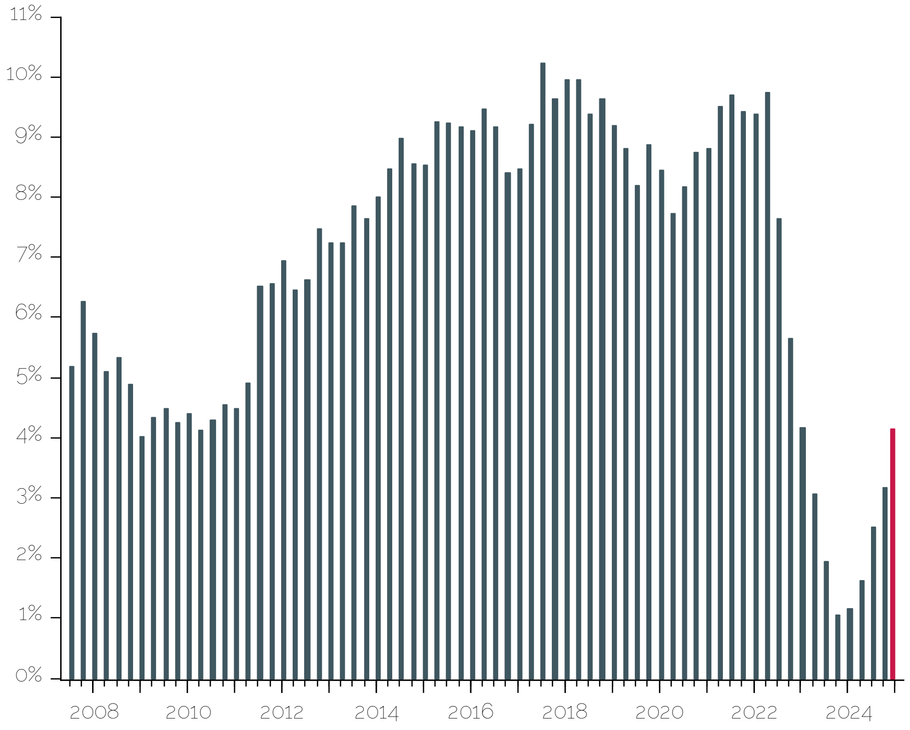
Market value-based discount in the first quarter of 2025

Index, 2010 = 100





Source: vdpResearch, own calculations

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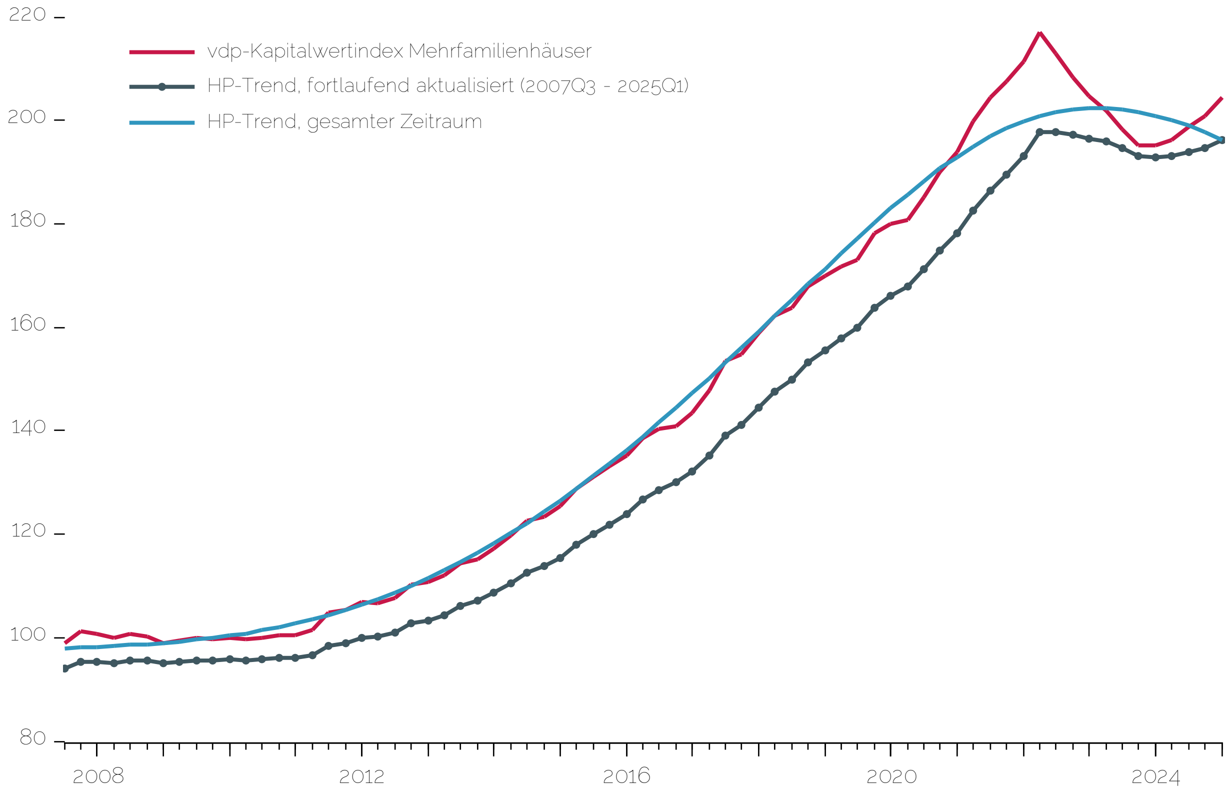
Historical HP trend values



Source: vdpResearch, own calculations

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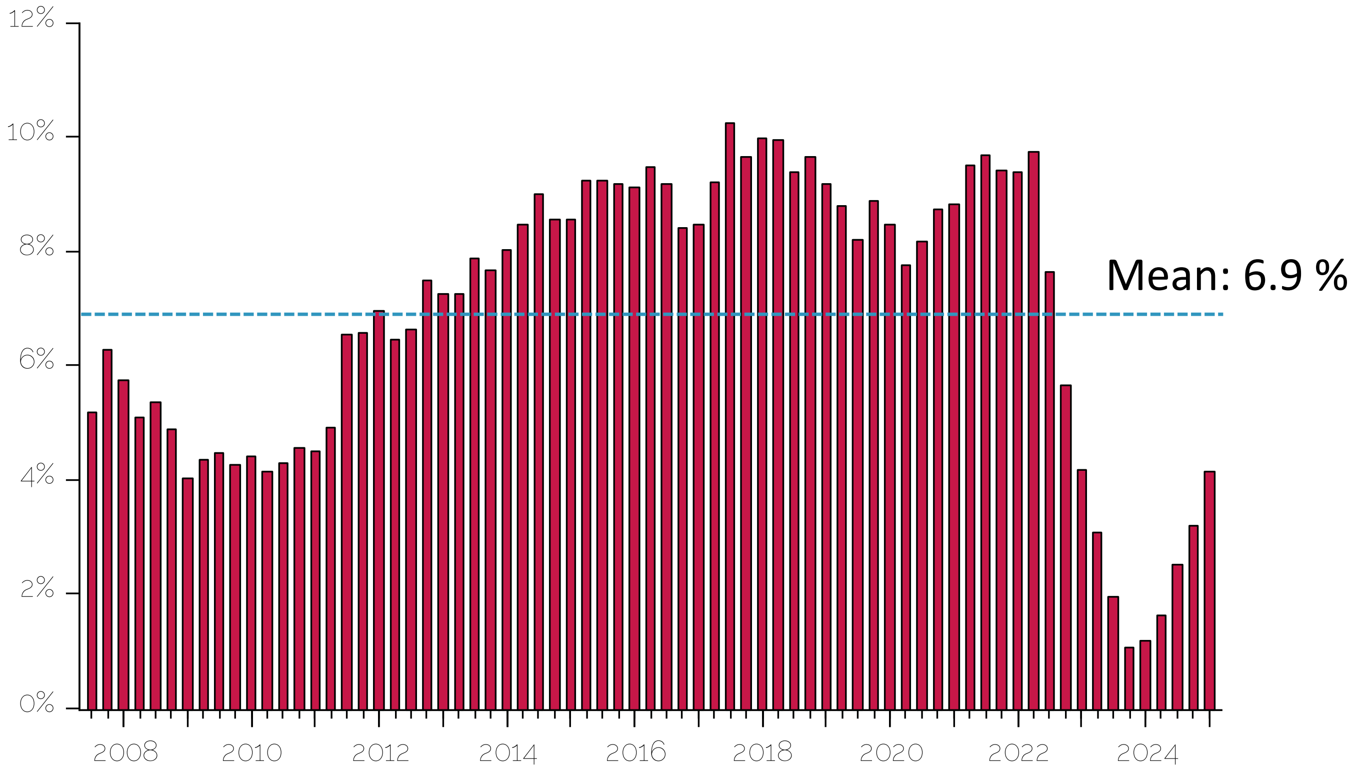
Historical development of discounts since 2007Q3



Source: vdpResearch, own calculations

Summary

- The HP filter is a standard mathematical tool used in macroeconomics to determine the trend of a variable over time.
- The HP filter is more flexible than a simple moving average or a linear time trend.
- The current results show that the method is robust and demonstrates the desired effect.
- As with any process, monitoring is necessary here in order to be able to make risk-appropriate adjustments to the market value of individual properties in rapidly changing market phases.
- This is ensured by the monitoring process (MaRisk, EBA Guideline LOAM, Art. 208 CRR).

Literature

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Thank you!

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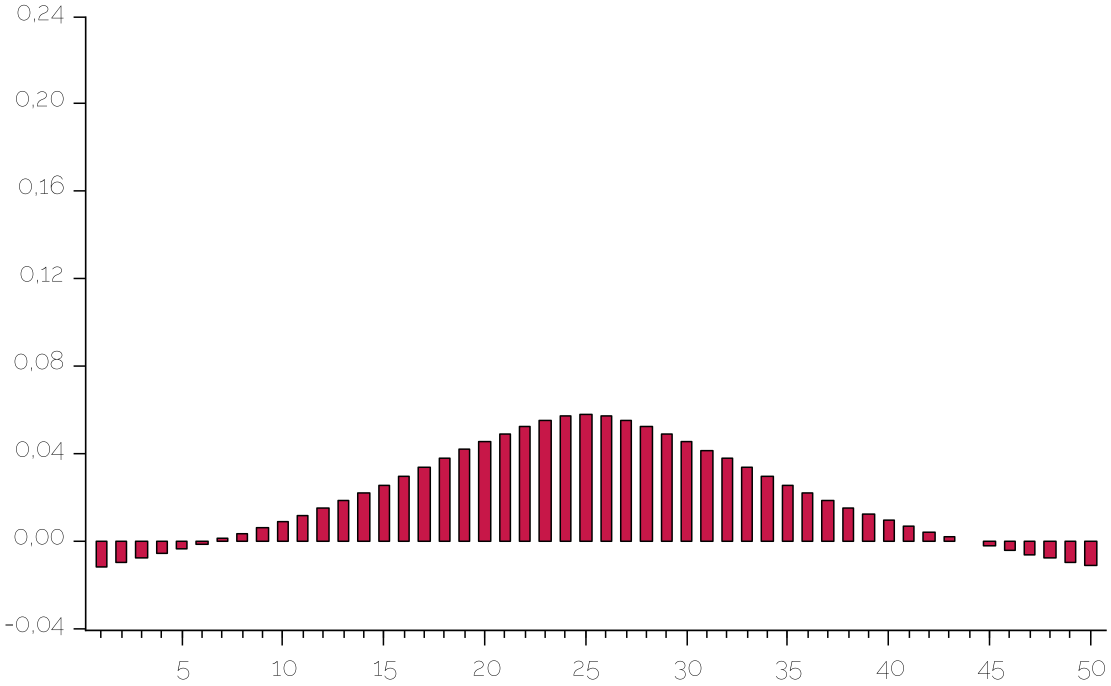
Digression: Filter weights for y_t for calculating the trend component g_{25}



Source: vdpResearch, own calculations

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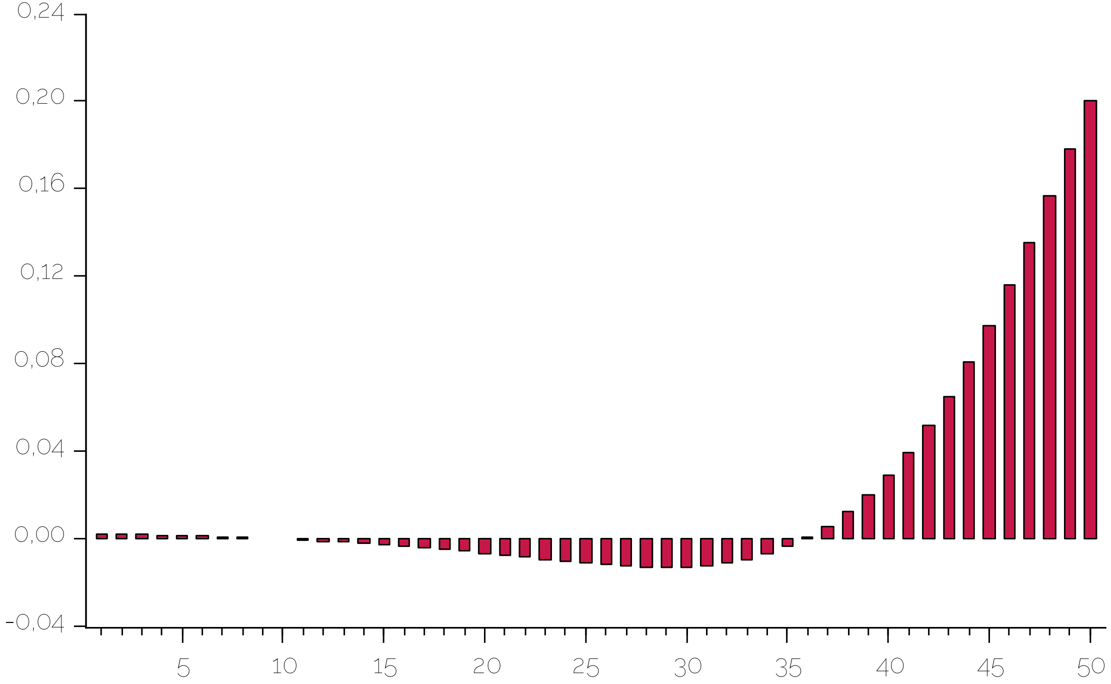
Digression: Filter weights for y_t for calculating the trend component g_{50}



Source: vdpResearch, own calculations

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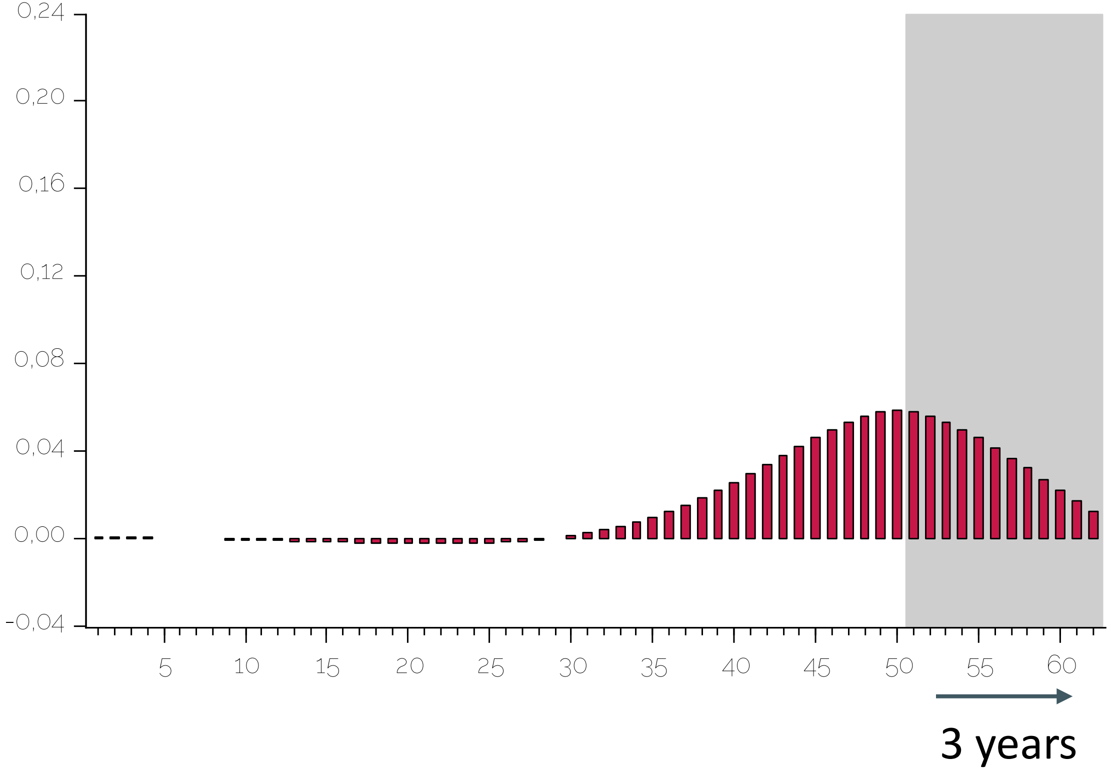
Digression: Filter weights for y_t for calculating the trend component g_{50} with negative scenario



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