

IMMOBILIEN FINANZIERUNG



— DER LANGFRISTIGE KREDIT —

DIGITAL
SPECIAL PRINT

MARKET AND PROPERTY VALUATION



PROPERTY VALUE – A NEW CONCEPT OF VALUE
FOR THE CREDIT INDUSTRY

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Lenders are facing major changes in the valuation of real estate under the revised Capital Requirements Regulation (CRR III). The regulatory authorities have taken into account the volatility in valuations due to different approaches by introducing a new property value through Article 229 of the CRR III, which estimates the value based on cautious and conservative valuation criteria and excludes expectations of price increases and adjustments to unsustainable value components during the term of the loan. This is the so-called "property value". In this article, the two authors explain the key changes that must be complied with on January 1, 2025, and at the same time present a tried and tested solution. However, they also emphasize that the new value concept does not require a completely new valuation methodology and that the new approach is also based on a market value determined by experts.

Red.

With the publication of the amended Capital Requirements Regulation (CRR III) and Capital Requirements Directive (CRD) on June 19, 2024 in the EU Official Journal, the implementation of the Basel III reforms in the EU was finalized. The innovations in the credit risk standardized approach (CRSA) are particularly relevant for real estate financing. The implementation of the output floor, which is calculated on the basis of the CRSA, ensures that all banks now have to apply the CRSA, even if they use the internal ratings-based approach (IRBA).

The amendment to the CRR also includes significant changes to real estate valuation. These include

Adoption of the definition of a sustainable value under the term "property value" from the Basel III proposals. The option of choosing between market value and loan-to-value ratio, which was previously anchored in Art. 229 CRR, is now replaced by "property value" as the sole value concept for equity capital privileging.

Regulatory Foundations

The application of the "property value" must be made to new business from January 1, 2025. The existing portfolio must be adjusted to this value concept by the end of 2027.

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

'(b) The value is estimated using prudent conservative valuation criteria that meet all of the following requirements:

(i) Expected price increases are not included in the value;

(ii) the value is adjusted to take account of the possibility that the current market value may be significantly higher than the value that is determined over the term of the loan would be sustainably achievable"

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

The European Banking Authority (EBA) has decided to apply the Basel III framework as part of its recommendations for the implementation of Basel III in Europe in 2019.

Basel value concept. Since this largely corresponds to the new formulation of Art. 229 (1) CRR III, these considerations can be used as a basis.¹⁾ Accordingly, the new definition of value does not allow for continued exclusive reliance on market value. The EBA also points out that the established value concepts of market value and loan-to-value ratio can be used as a starting point, but that the requirements of the Basel value definition should be taken into account.

European positions on implementation

The European Central Bank commented for the first time on the new concept of value in its Supervision Newsletter of August 14, 2024²⁾. In it, it stresses the need for a cautious and conservative valuation of real estate and refers to Art. 208 (3) CRR, according to which credit institutions must collect market data and monitor real estate values in order to identify significant losses in value. This data should be used to check whether the market value needs to be adjusted with a discount.

From these positions it is clear that the new value concept does not intend to introduce a completely new valuation methodology.

status quo in Germany

The option to choose between market value and loan-to-value ratio, which was previously anchored in Article 229 CRR, has been implemented in

Germany as an institution-specific option. Individual banks have decided for themselves on which of the two approaches will be used for the purposes of capital privileges. In the savings bank and financial group and in the cooperative sector, solutions also existed at group level.

The national banking supervisory authority has stated that for the operationalisation of the "property value" in Germany two approaches are possible:

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The loan-to-value ratio pursuant to Section 16 (2) Sentences 1 to 3 PfandBG in conjunction with the Bel-WertV meets in any case the requirements of Article 229 (1) CRR.

Alternatively, the market value can be used as a basis. In a step following the market value determination, this value must be checked to see whether an adjustment is necessary in order to meet the requirements of Art. 229 (1) letter b) CRR III. While the market value is of course determined on a property-related basis, this review and, if necessary, adjustment of the market value can be carried out on a portfolio-related basis on the basis of statistical evaluations of relevant market data.

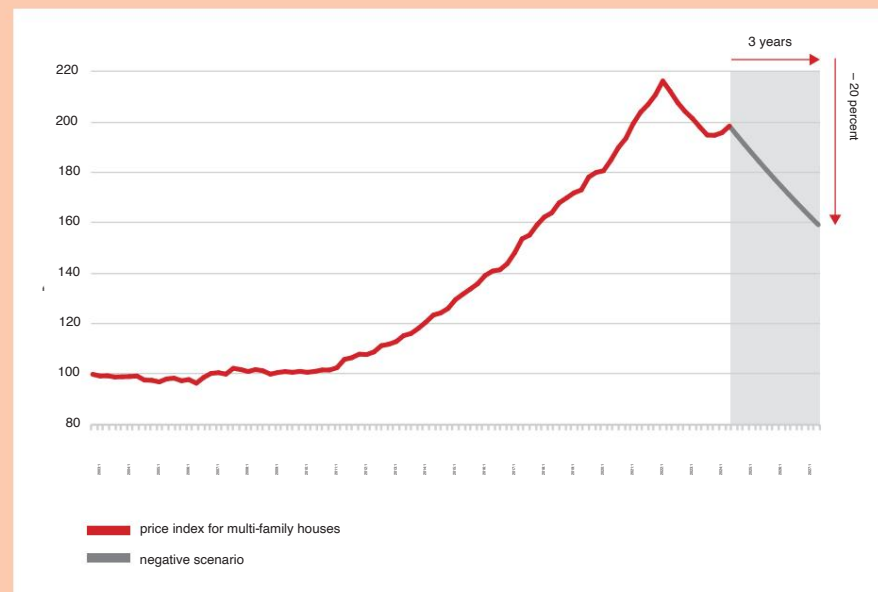
While the use of the loan-to-value ratio does not require any further methodological clarification, the market value-based approach requires an examination of the question of how this review and adjustment of the market value to the requirements of Art. 229 (1) CRR III can be carried out.

Methodology for determining the „Property Value“

The Association of German Pfandbrief Banks (vdp) has worked closely with vdpResearch GmbH to develop a methodology for a discount procedure which, when applied to the market value, could meet the requirements for the "property value". The basic idea is to break down a real estate price time series into a trend and cycle component. The "property value" as a cautious, sustainable value that does not take price exaggerations into account corresponds at most to the long-term trend. Cyclical components, i.e. short-term market exaggerations, are filtered out using an adjustment mechanism.

In order to extract a trend from a time series, a variety of methods have been developed in empirical economic research.³⁾ One of the most widely used methods is the so-called Hodrick-Prescott filter (HP filter).⁴⁾ This aims to separate cyclical fluctuations from long-term growth trends and thus enable precise trend detection. The HP filter has since become a standard instrument for identifying cyclical fluctuations in macroeconomic data, particularly for the analysis of gross domestic product (GDP), unemployment figures and inflation rates.

Figure 1: Market price time series with negative scenario



Quelle: vdpResearch

It is also used in the calculation of the countercyclical capital buffer (CCB) as an instrument of macroprudential regulation to adjust for any excessive lending by banks.⁵⁾

of the time series. For quarterly data such as the vdp real estate price indices, a $\bar{y}$ value of 1600 is usually recommended.⁶⁾

The relevance of the HP filter for the analysis of real estate markets is based on its ability to differentiate short-term, possibly speculative price fluctuations from sustainable, trend-based price developments. Applied to real estate price indices, the HP filter allows the isolation of long-term market trends, which is particularly useful for determining sustainable real estate values. By removing cyclical price fluctuations, the HP filter focuses on sustainable value development and identifies speculative price movements as short-term deviations. The basic equation of the HP filter for determining the trend g_t

from a suitable market price series y_t is given below:

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

The HP filter works as follows: It minimizes the sum of the squared deviations between the observed and the smoothed values, taking into account the smoothness of the trend. A so-called "smoothing parameter" $\bar{y}$ is adjusted to regulate the influence of cyclical fluctuations. Depending on the value selected for $\bar{y}$, shorter or longer cycles can be detected in

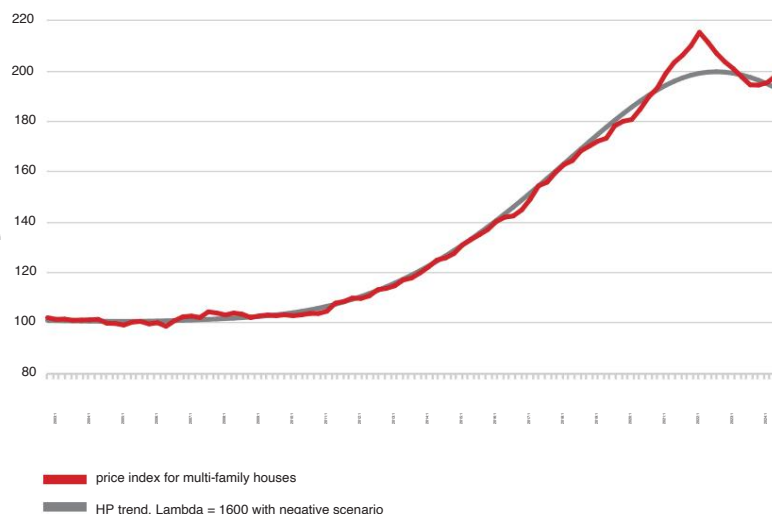
boundary value problem and solution approach

One disadvantage of the HP filter is its boundary value problem.⁷⁾ Values at the current edge of the time series on which the calculation is based are given a large weight in the calculation of the trend component. This can lead to the calculated trend reacting too slowly at the cyclical turning points. Particularly in economic downturns, this can lead to the trend being above the current market development, which means that the "property value" determined on this basis cannot be considered sufficiently conservative.

To take this circumstance into account, the respective real estate market price time series is extended by a negative scenario. The assumed negative scenario is based on a requirement that has been communicated for many years by the national banking supervisory authority as part of the monitoring of real estate values. According to this, real estate values must be checked if real estate prices, for example in the residential market segment, fall by 20 percent over a period of three years.

Applied to the methodology for determining the "Property Value", this means

Figure 2: Time series and HP trend



Quelle: vdpResearch

that the time series is extended at the current end to include this negative scenario – a drop in property prices by 20 percent over a period of three years. Only then is the HP trend calculated based on the extended time series.

Example of multi-family houses

These methodological considerations for calculating the “property value” are presented below using the example of the multi-family housing market segment.

Figure 1 shows the development of prices for multi-family houses from the first quarter of 2003 to the third quarter of 2024. It is supplemented by the negative scenario, which assumes a negative price development of 20 percent for the following three years.

The time series thus extended is the starting point for calculating the HP filter for the current 3rd quarter of 2024.8)

The HP trend and time series calculated in this way are shown in Figure 2.

Based on the determined trend function, the percentage deviation between this and the market price time series at the current point in time, here the 3rd quarter of 2024, is now determined.

$$\text{Deviation in percent} = \frac{y_t - g_t}{g_t} \times 100$$

The following decision logic is taken into account: If the percentage deviation is greater than zero, then this is the

applicable discount that is to be applied to the market values MW_t determined in this quarter. If the long-term trend is at or above the market price time series, it follows that the percentage deviation is zero or negative. In this case, no discount is made on the market value. Formally, the “property value” PV_t for a quarter is thus:

$$PV_t = \begin{cases} MW_t \cdot \left(1 - \frac{y_t - g_t}{g_t}\right), & \frac{y_t - g_t}{g_t} \times 100 > 0 \\ MW_t, & \frac{y_t - g_t}{g_t} \times 100 \leq 0 \end{cases}$$

This means that in the case of multi-family houses, a discount of 2.5 percent is currently required. The real estate market is currently in a stabilizing downturn phase, so the discount here is small. In boom times, the discount is significantly higher and has historically been over 10 percent. Over the period under review from 2003 to today, the discount was an average of 7.4 percent for this market segment.

Market value is always the basis

The methodology explained here represents a possible way to operationalise the “property value” within the meaning of Art.

229 (1) CRR III. The starting point is always a property-specific market value determined by an expert on a valuation date. This is reduced by the discount valid on this date, which is based on the current market

development and thus becomes a “property value”.

In summary, the combination of the negative scenario used by the supervisory authorities with the HP filter offers a methodology for operationalizing a sustainable value. This approach enables a transparent and comprehensible derivation of a “property value” that can meet the requirements of banks and supervisory authorities. Given the dynamic nature of real estate markets and the ongoing development of economic conditions, regular validations and further development of the methodology are required so that the filter accurately captures market-related fluctuations in the long term and provides a reliable benchmark for sustainable values.

footnotes

- 1) Considerations were also made regarding the implementation of the concept at European level. See (Crosby and Hordijk, 2023).
- 2) Commercial real estate valuations: insights from on-site inspections
- 3) For an overview of the different procedures used by the Deutsche Bundesbank, see (Stamfort, 2005)
- 4) See (Hodrick and Prescott, 1997)
- 5) Vgl. hierzu (Tente et al., 2015).
- 6) Vgl. hierzu (Ravn and Uhlig, 2002) demonstrating that the filter parameter should be adjusted by multiplying it with the fourth power of the observation frequency ratios. This yields an HP parameter value of 6.25 for annual data given a value of 1600 for quarterly data. The relevance of the suggestion is illustrated empirically. “container-title”: “The Review of Economics and Statistics”, “DOI”: “10.1162/003465302317411604”, “ISSN”: “0034-6535”, “issue”: “2”, “journal-abbrev”: “The Review of Economics and Statistics”, “page”: “371-376”, “title”: “On Adjusting the Hodrick-Prescott Filter for the Frequency of Observations”, “volume”: “84”, “author”: “Ravn”, “given”: “Morten O.”, “family”: “Uhlig”, “given”: “Harald”], “issued”: “2002-05-01”], “schema”: “https://github.com/citation-style-language/schema/raw/master/csl-citation.json”.
- 7) See (Stamfort, 2005), p.28 ff.
- 8) The HP filter is calculated over the entire period from 2003 Q1 to 2027 Q3. However, the trend value of interest is the current status of the time series, in this case 2024 Q3.

Sources

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