



Risk factors in the real estate sector



Non-performing-loan (NPL) - noun

A loan is considered non-performing if it is unlikely that the borrower will be able to fulfill its entire loan obligations or if the borrower is more than 90 days in delay with its interest and repayment obligations.

Table of contents

1	Our theses at a glance	04
2	Risk factors in the real estate sector	06
3	Outlook: Development of NPL volume and sales	14
4	Excursus: Reducina complexity in crisis situations	19



Commercial real estate loans in a crisis: What's next? - Our theses

1

The number of German NPLs in commercial real estate financing will increase significantly in 2024 and 2025.

2

In Germany, developers and building contractors are currently facing challenging situations.

Many subordinated / mezzanine lenders will have to write off their exposures. The risk is also increasing for senior lenders.

3

Risk factors for the asset class office in Germany remain high. However, a dynamic development similar to the one in the US is unlikely.

4

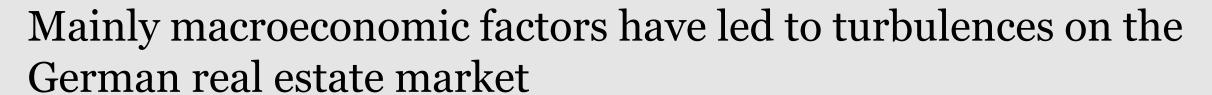
A "wait-and-see" approach is currently the preferred option for both banks and potential sellers – essentially to avoid significant haircuts and the (still) persisting hope of a market recovery.

5

Despite the increasing amount of non-performingloans, a significant wave of NPL sales has not taken place yet. However, regulation and supervisory authorities will significantly increase the need for action of market participants. Loan sales are on the rise and will be established more and more as a valid option in crisis

situations. This will result in a fundamental revitalisation of the real estate transaction market through the resulting sales.





In order to understand whether there will be a wave of NPLs in German commercial real estate financing, it is necessary to understand the factors that have led to the current crisis in the real estate market.

The main factors having contributed to an increase in the volume of NPLs in the real estate sector can be summarised as follows:

- · Economic fluctuations
- Inflation and interest rate trends.
- · Development of property values
- Real estate transaction market
- Other key factors (including regulation, supervision, working from home or online shopping)

These key factors are presented and analysed in more detail in this chapter.

Key factors influencing the NPL volume in the real estate sector



The available scientific evidence from various studies illustrates a complex link between the NPL volume and a variety of macroeconomic indicators. Significant correlations are particularly evident in relation to the general interest rate level, real income, the economic stability of a country and the current inflation rate.

Studies analysing selected markets, such as Turkey, have shown a significant positive correlation between the interest rate, the total loan volume and the NPL volume. Further studies exhibit that both the gross domestic product ("GDP") and the unemployment rate have a significant influence on the NPL volume. In addition to a negative correlation with GDP, a positive correlation with the unemployment rate could also be observed. Similar significant negative correlations between GDP and the NPL volume were also observed in other countries such as Malaysia.

Economic growth in Germany (in %)

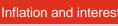


Source: Federal Statistical Office. Ifo Institute

Commercial real estate loans in a crisis: Is Germany facing a wave of non-performing-loans?



Rising interest rates lead to higher financing costs and thus other asset classes are becoming more attractive again



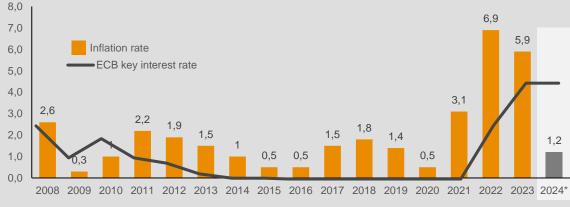
Inflation and interest rate development

Higher inflation and rising interest rates lead to liquidity problems

Inflation leads to higher rental rates, management costs and construction expenditure, reduces capital buffers and increases the NPL risk. At the same time, rising interest rates increase financing costs, release amortisation potential and increase the credit default risk.

Rising inflation burdens the real estate market through higher rental rates, management costs and construction costs. The drastic rise in inflation since the beginning of 2021 is the result of the historically exponential increase in the money supply of central banks and the shortage of goods due to the Ukraine conflict. Rising energy costs are reflected in management costs, which leads to a reduced capital buffer and an increased risk for NPLs, especially with long-term fixed interest rates being at a low level.

Inflation rate and interest rates in Germany from 2008 to 2024 (in % vs. previous year)



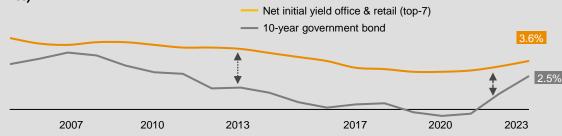
Source: Federal Statistical Office, INFINA *Data forecast

The development of interest rates also has a substantial impact on the real estate market. A rising key interest rate induces liquidity bottlenecks and releases depreciation potential. The rise in financing interest rates burdens borrowers and increases the risk of a loan default, particularly in the case of loans with variable interest or expiring fixed interest periods.

The financial crisis of 2007/2008 led to a low interest rate policy, which resulted in low refinancing costs and risky financing strategies. Inflation and key interest rates rose with the outbreak of the Covid-19 pandemic and the Ukraine conflict.

The German key interest rate, which was just below 0.5% at the beginning of 2022, increased to 4.5% at the end of 2023.

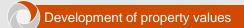
Development of net initial yields (top-7 locations GER) and 10-year government bonds (in %)



Source: Central bank of the Federal Republic of Germany, Banque centrale du Luxembourg

While high net initial yields could still be realised on real estate investments in recent years, real estate was the preferred asset class compared to low-vielding ten-year government bonds. This yield spread has narrowed in the recent past, meaning that real estate has become much less attractive to investors.

Declining property values lead to significantly higher risks in existing real estate financing



Declining property values lead to significantly higher credit risks

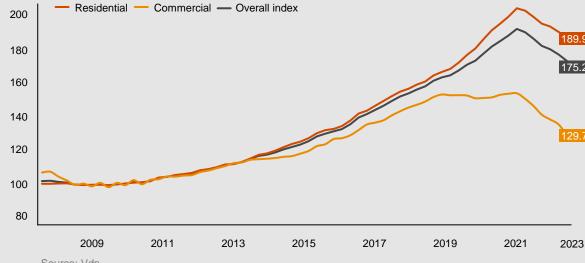
Declining property values are an increasing challenge for market participants. This is mainly due to the fact that the collateral for real estate financing is based on property values. If the property value reduces in relation to the nominal loan amount, the loan-to-value* (LTV) ratio and therefore the risk increases considerably.

In the last ten years, property values in Germany have reached an **all-time high**, which was primarily a result of the change in the monetary policy and the resulting favourable financing conditions. Values in prime locations have initially stagnated since the beginning of 2022 and are now declining. This development has been accompanied by **significant decreases in values** in B and C locations. The effect is particularly strong in the commercial real estate sector, especially for properties with **poor energy efficiency**. Furthermore, the **office submarket**, which has been undergoing structural changes since the end of the Covid-19 pandemic, is particularly affected.

In a real estate financing context, the **LTV plays a key role** in stating the ratio of the outstanding loan amount to the property value and usually **ranges from 50% to 70%** for new financing (depending on the asset class, risk structure, etc.). In general, there are contractually stated thresholds known as **covenants** in commercial real estate financing that must be complied with. If the LTV rises above the contractually stipulated value (known as a covenant breach), this must be "cured" by injecting new equity until the LTV is below the **defined threshold.**

Declining property values are currently leading to an increasing number of **LTV covenant breaches**. If the borrower cannot contribute any additional equity, the loan is quickly considered to be **at risk of default or in actual default**. This does not necessarily mean that the property will automatically show a decline in operational performance.

Vdp real estate price index for residential and commercial properties until 2023



Source: Vdp



Commercial real estate loans in a crisis: Is Germany facing a wave of non-performing-loans?

March 2024

PwC

^{*}Loan-to-value (LTV) refers to the ratio of the loan amount to the market value of a property and is a key figure in the assessment and approval of financing.



No final pricing has taken place yet on the real estate transaction market

Real estate transaction market

Real estate transactions in Germany have almost come to a standstill since 2023

The factors influencing the real estate sector in Germany are having a significant impact on transaction volumes and a shift in usage classes.

There has been a **decline in transaction volumes** on the real estate transaction market in Germany since the beginning of 2022. The year 2024 is also starting with extremely reduced volumes. This development is largely attributable to external (macroeconomic) factors, primarily **interest rate and inflation trends**. The transaction volume reduced from around € 111 billion in 2021 to € 80 billion in 2022 and finally to just € 32 billion in 2023.

Real estate transaction volume in Germany (in € billion)



Additionally, the breakdown of real estate transactions by type of use shows a **significant shift from office buildings to logistics, residential and retail**. Whereas in 2022,
office buildings were responsible for the largest share of the transaction volume
of the investment market, in 2023 the **share of the asset classes logistics, residential and retail** has **increased significantly**.

Real estate transactions of different asset classes compared over time



Commercial real estate loans in a crisis: Is Germany facing a wave of non-performing-loans?



Fundamental social trends pose major challenges to office and retail properties in particular



Other key factors influence the real estate market

In addition to macroeconomic factors considered in detail so far, there are many other factors that have a strong influence on developments on the real estate market. While the office submarket crisis persists, retail properties are already showing the first signs of stabilisation - a potential glimpse of hope for the sector.



Retail properties in crisis

The strong increase in online retail poses a challenge for stationary retailers. The wave of insolvencies among retailers therefore does not seem to be subsiding. Although there are currently signs of an upward trend following the extreme slump caused by the Covid-19 lockdowns, both prime high street locations as well as B and C locations, department stores and shopping centres are still partially affected by high vacancy rates. A PwC study published in 2023 summarises the situation of shopping centres as part of a survey as follows:

- 34% of German shopping centres are estimated to be unsustainable by the respondents.
- 61% of the respondents go to a shopping centre without necessarily buying anything,
- Vacancies of 15-20% are standard and the reduction in price per **square metre** for new lettings is 16%.



For the reasons mentioned above, lenders are clearly reluctant to (re-)finance retail properties. As with office properties, loan defaults can occur due to high vacancy rates, declining rental rates and property values.

Office properties in crisis



Risk factors in the real estate sector

A PwC study on the German office submarket published in 2023 reveals the following findings, among others, as part of a survey:

- Even after the Covid-19 pandemic, employees spend just over half of their working week working from home.
- Accordingly, over 50% of office space in Germany is unoccupied,
- 78% of employers are already planning to reduce their office space by more than 20% over the next few years in order to adapt to the changing needs of their employees.

The office market is therefore undergoing major structural changes. However, the demand for new office properties in prime locations that fulfil all requirements for ESG*, sustainability and energy efficiency remains high.

In particular older, non-energy-efficient offices in B and C **locations** are under pressure. There is a high risk that leases will not be extended at all or only with a significant reduction in space. Tenants' demands in terms of fit-out have increased significantly – in order to meet these demands, larger investments are required that need to be financed.

A distressed situation can quickly arise, particularly in cases of older office properties as mentioned above. The spiral of a lack of new lettings, investment backlog and the resulting devaluation means that neither refinancing nor sale is possible without major discounts.



*Environmental, social and governance (ESG)



Supervisory law and regulation increase the need for action of lenders



Other key factors influence the real estate market

In addition to the macroeconomic factors considered in detail so far, there are many other factors that have a strong influence on developments in the real estate market.



Supervision and regulation

The regulatory requirements for banks in real estate financing are becoming stricter: the EBA (European Banking Authority) Guidelines on NPLs provide guidelines and recommendations for the treatment of non-performing-loans by banks in the European Union. These guidelines aim to improve the efficiency and consistency of NPL management and reduce the risks for banks. In addition, there is the proper implementation of accounting standards in the credit sector (IFRS 9*). To monitor the implementation of these guidelines and standards, the European Central Bank and the Central Bank of the Federal Republic of Germany are increasingly carrying out on-site inspections (OSI) at financial institutions to monitor the existing risk structures, valuations and risk control procedures.

In the recent past, the focus has been on the **real estate loan books** of financial institutions.

Intensive inspections and discussions about the recoverability of collateral and the property values recognised are forcing banks in some cases to raise significant amounts of additional specific loan loss provisions and ultimately to act more quickly. The supervisory approach is therefore a driving factor that leads to the increased categorisation of loans as "intensive-care" and "non-performing".

Banks must present sustainable solutions for dealing with non-performing borrowers and implement efficient risk management. There is also a higher **capital adequacy requirement** for underperforming loans according to Basel II and Basel III**. With increased NPL ratios, banks will decide in favour of selling loans as a strategy in the medium term.



Commercial real estate loans in a crisis: Is Germany facing a wave of non-performing-loans?

^{*}International Accounting Standards (IFRS)

^{**}Basel framework comprises all applicable standards of the Basel Committee on Banking Supervision on the Capital Accord (Basel || & ||)



Special case of development financing in Germany: developers and building contractors particularly at risk of default

Risk factors in the real estate sector

Why are developers in particular in difficulties at the moment? A comparison with other European countries shows that the effects in this area are particularly serious in Germany.

It is noticeable that particularly developers and building contractors in Germany are currently affected by the turbulence in the market, resulting in an increasing number of insolvencies of individual project companies as well as entire businesses (developers).

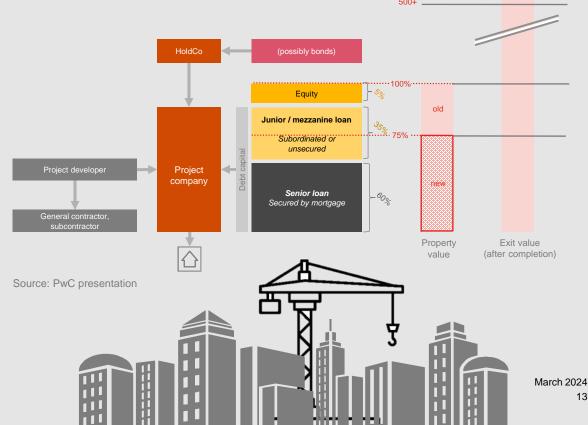
The circumstance that the wave of insolvencies in this area is hitting mainly Germany can be explained by the fact that in the past - compared to other European countries - it was specific to Germany that developments could be undertaken with little or (almost) no equity. In some cases, complex financing structures with subordinated or mezzanine loans at the level of the project companies and, where applicable, promissory note loans at the holding level accounted for the vast majority of developments.

In the past, the market environment was also characterised by constantly rising real estate prices and almost flat construction costs. The calculation of the developers, who were able to achieve extraordinarily high margins through sales worked out well. On the financing side, the high-interest, short-term subordinated or mezzanine loans could also be serviced based on the high sales proceeds and offered institutional investors a good opportunity to achieve a higher return in the lowinterest environment.

However, developers are now facing increased construction costs, longer construction periods and a lack of exit options, combined with ongoing (high) financing costs with sometimes extraordinarily complex financing structures. Junior and mezzanine tranches were the rule rather than the exception in the development sector - moreover, there is sometimes additional financing at holding level, which can also no longer be serviced.

Large-scale projects with an exit volume of more than € 1 billion are affected given that there is a lack of domestic and foreign (institutional) investors who were previously considered as buyers. In addition, building contractors whose e.g., condominium sales have stalled or in some cases come to a complete standstill are also currently unable to find an exit option or secure refinancing.

Example of project development financing (schematic diagram)





The NPL volume is already increasing

Volume of non-performing loans in Germany increases

Based on an analysis published by the European Banking Authority (EBA) in January 2024, the German NPL volume increased from € 31 billion (in September 2022) to € 34 billion at the reporting date of September 2023. This corresponds to an overall increase of 9.7% compared to the previous year.

Share of non-performing commercial real estate loans of total volume increases

The 56% increase in non-performing commercial real estate loans (CRE loans) is particularly noteworthy. In September 2023, the ratio of non-performing CRE loans (€ 9.7 billion) to all CRE loans (€ 285 billion in total) was 3.4%, compared to 2.4% in September 2022 (with € 6.2 billion in CRE NPLs and € 260.3 billion in CRE loans in total).

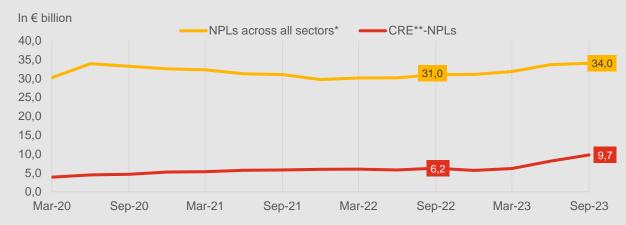
The increase in CRE NPLs will gain momentum in the short to medium term and lead to a wave of NPLs.

56%

Increase in the volume of non-performing commercial real estate loans compared to the previous year (Sep. 2022 to Sep. 2023)

Non-performing real estate loans for residential properties amounted to € 2.8 billion as at September 2023 and even recorded a slight decline of € 100 million compared to the previous year. Stability prevails in the private real estate sector, whereas the commercial market and construction sector are suffering the consequences of changing macroeconomic conditions in the form of write-downs. The stability can be explained primarily by the fact that private residential real estate and construction loans are being repaid and the remaining residual debt should have reduced significantly after the fixed interest period expires. There are no value thresholds (LTV covenants) stipulated in the loan agreements in this area, meaning that the resulting problems from commercial real estate financing do not materialise or only in a very limited form.

Development of the NPL volume in Germany from 2020 to 2023



Source: European Banking Authority

*Sectors divided into loans for private households, residential real estate, companies outside the financial sector, small and medium-sized enterprises and commercial real estate (CRE)

**Commercial Real Estate



Commercial real estate loans in a crisis: Is Germany facing a wave of non-performing-loans?

March 2024

A comparison with the NPL wave after the great financial crisis shows significant differences to the current situation

An increase in the NPL volume in German commercial real estate financing is to be expected - loan portfolio sales will (initially) not take place...

...but are we heading for a situation comparable to that of the financial crisis and subsequent years, in which the credit market was characterised by a "NPL wave" with high loan portfolio sales?

Before 2007 and during the great financial crisis, the real estate industry and real estate lenders in particular played a key role: refinancing through securitisation transactions, such as commercial mortgage-backed securities (CMBS), contributed significantly to bank insolvencies. At the time, banks granted real estate loans with extremely high loan-to-value ratios ("LTVs" of over 80-90%) without additional collateral or guarantees (so-called "non-recourse"). As a result of a rapid decline in property values, the amount of the outstanding debt exceeded the value of the property pledged as collateral. The borrowers' equity was quickly "burnt", meaning that the lenders became the owners of a large number of properties at once. The result was a sudden wave of NPL sales, as banks were able or forced to clean up their portfolios.

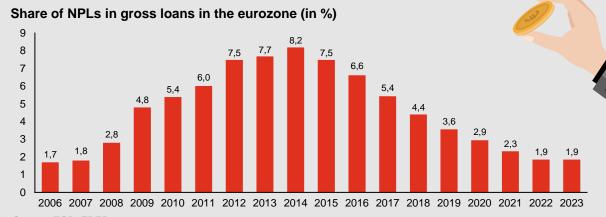
Investors bought the NPL portfolios and benefited from the positive performance in subsequent years (partially after considerable capex investments and asset management measures).

An increase in the NPL volume in commercial real estate financing is to be expected due to the intensifying influencing factors in the real estate market. However, a wave of NPL portfolio sales with massive loan portfolio sales, as we experienced during and after the 2007/2008 financial crisis, is not in sight. In the past, traditional senior lenders were significantly more risk-averse than before the financial crisis, which is a significant difference.

Why do loan defaults remain "invisible" for the time being despite increasing market tensions?

A review of 2007/2008 shows that the NPL volume reacted with a time lag and only rose sharply between 2012 and 2014. In the real estate sector in particular, the effects of the current economic situation will only become apparent with a delay, as the real estate markets react comparatively slow to macroeconomic changes.

As a result, the increase in the volume of non-performing real estate financing is also expected to be delayed. In addition, the changes to the regulatory framework following the great financial crisis have led to more restrictive lending processes and significantly lower LTVs. The supervisory authorities obliged banks to hold more equity capital for loans granted. This difference to the initial situation during the great financial crisis is significant and should prevent a massive increase in the NPL volume in the future.



Source: ECB. FRED

An additional key factor that distinguishes the current situation from the great financial crisis is that the senior secured lenders do not yet see any need to sell their loans. Due to the registered land charges and a property value that is (still) higher than the claim, there is no need to act. The subordinated or mezzanine lenders may feel compelled to look for joint solution options in the short-term. However, in most cases, a loan sale is not yet an option for them either.



Differences between the German and US real estate markets

The US real estate market reacts faster and is more volatile than the German market.

A comparison of the German and US commercial real estate markets shows that the American real estate market reacts more quickly to changes in general conditions and is therefore more volatile than the market in Germany.

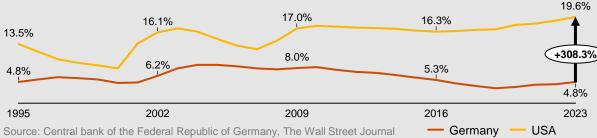
This is partly due to the greater transparency of the US real estate market. Even in transformative phases, market participants have access to up-to-date and reliable market data faster, which enables them to make well-founded transaction decisions. Reduced transparency and delayed availability of market data leads to increased uncertainty, particularly in a changing market environment, and therefore tends to result in restraint on the transaction market.

German office properties have lower vacancy rates than in the US

Another key difference in the current developments on the US and German office markets relates to property utilisation. Due to the Covid-19 pandemic in particular, the labour market in the USA has become accustomed to the benefits of working from home, resulting in a large number of vacant office buildings. Large companies are cancelling leases or reducing their office space. At around 20%, the current vacancy rate for office buildings in the USA is at its highest level since surveys began in 1979. This effect is particularly pronounced on the West Coast due to the presence of Silicon Valley and the technology sector.

In Germany, on the other hand, the distances to offices are often much shorter, which also leads to vacancies, but to a lesser extent, most recently at just under 5%. Overall, the German office submarket is less volatile in terms of vacancy rates and has seen a significant decline since the financial crisis compared to the US market.

Vacancy rates for office properties in Germany and the USA (in %)



Complex financing structures in the US lead to higher risks

The approach of American banks to financing office real estate is often significantly more complex compared to German standards. American banks often structure financing in various tranches and use subordinated and mezzanine financing to minimise the equity share. If there is a drastic devaluation of the property due to the very dynamic market, investors are quickly "out of money". Their equity is thus "burnt" and they have no motivation to continue investing in the property. As the banks also do not want to get involved in active asset management or finance additional tranches, selling the loan is a valid option, which is now increasingly undertaken in the USA.

It should be noted that the German office property submarket has better occupancy rates and is subject to less overall volatility than the market in the US. However, the risk factors in the German office submarket remain high: the focus is particularly on older office buildings in B and C locations that do not meet today's energy efficiency standards. We expect the largest number of sales of non-performing-loans in respect of these properties.

The banks' view: Why "amend and extend "* is (still) favoured over a loan sale

There are several factors in favour of credit sales as a valid option for lenders

As already explained, the stricter supervisory requirements and the monitoring of their compliance have a significant influence on lending decisions for lenders. But when can a loan sale actually make sense for a financial institution?

- Profitability: As soon as the value of the collateralised property has fallen below the value of the receivable (LTV > 100) and no further increase in value can be expected in the long-term, the sale of the receivable should be considered.
- lenders are not property holders or developers: In the event that the LTV is > 100 and the borrower no longer has any motivation to invest further equity in the exposure, the financier becomes de facto the owner of the collateral. In most cases, however, the financier has no interest, capacity or expertise to take the properties or (unfinished) developments "on their books", complete construction and/or manage them.
- Risk reduction and capital adequacy: The sale of an NPL enables the bank to reduce the credit risk associated with this loan and clean up its balance sheet. The increased capital requirements for NPLs place an additional burden on banks. An NPL sale can be part of an NPL strategy prescribed by the supervisory authority.
- Capacity limits of the workout departments: The so-called workout departments of real estate lenders are already reaching their limits. The complex restructuring situations require a high level of experience and interdisciplinary expertise. The number of cases is constantly increasing.

However, one key factor is (still) preventing lenders from minimising their credit risks through NPL sales

Although the aforementioned factors are already present, there are no significant loan sales in Germany. This can be explained as follows:

- The discounts (so-called "haircuts") on the sale of receivables in the real estate sector are too high (from lenders' point of view).
- The general market opinion is that the market will recover in the medium-term, which is anticipated with loan prolongations and restructurings.
- The lack of a transaction market in the real estate sector results in a very difficult pricing at property as well as loan level.
- In most cases, subordinated or mezzanine lenders are also involved in the real estate financing. As long as they still have an interest in continuing to participate in the financing, they try to keep the senior lenders on board as well.
- Many financing institutions fear that they are currently selling loans at a high discount and will ultimately not participate in a potential recovery in value ("upside").
- Last but not least, many banks fear for their good customer relationships or reputation if they sell individual receivables or entire portfolios.

How long arguments against real estate loan sales will dominate remains questionable. In Germany, a "wait and see" or "amend and extend" approach is still the rule and loan sales are the exception. However, the pressure on stakeholders is increasing considerably: supervision and regulation, increasing insolvencies and a growing need to invest in properties that are not fit for the future. All of these factors are contributing to a significant increase in market momentum and will help to resolve the current "transaction vacuum".

^{*}Definition of "amend and extend": The term of an existing financing is extended and the conditions are amended at the same time.





In crisis situations, the complexity of real estate financing quickly increases for all stakeholders

Reducing complexity as the basis for successful restructuring

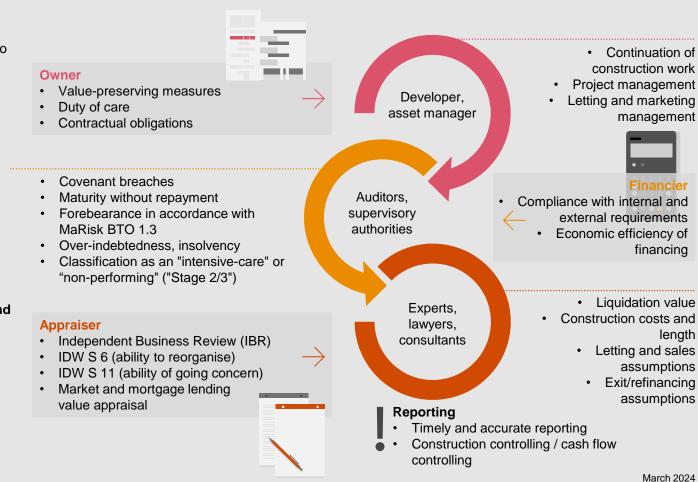
If a crisis situation arises due to covenant breaches, early maturity of the loan with no prospect of repayment, insolvency of the borrower or other negative events, the first step is to create transparency and reduce complexity.

Process in real estate crisis situations

- Immediate property and financial analysis
- Communication with creditors
- Identification of measures and options
- 4 Development of a strategy
- Negotiations with stakeholders
- Implementation and monitoring

Overall, real estate crisis situations require careful analysis, strategic planning and a flexible response in order to minimise the negative effects (e.g. construction standstill).

However, due to the prevalent complexity, the first step is to identify all relevant stakeholders and work out the possible options for action. It is important not to make any hasty decisions that could be detrimental to the long-term solution of the situation.



With experts' assistance a valid basis is created in order to make robust decisions for committees

Example: Development in crisis

What options do developers/borrowers and lenders have in crisis situations? This depends very much on the circumstances and, in particular, the stage of the development.

Case 1: Real estate financing (with or without building rights)

- Transparency/status of building permits
- Reduction of ongoing (project) costs
- Validation of the envisaged construction project (in particular types of use)
- Intensive discussions with all stakeholders

"Wait & see" approach as a valid option

Case 2: Development under construction (completion < 85%)

- Transparency of incurred & remaining construction costs and length
- Validation of existing contracts (general contractor, subcontractor) and re-awarding
- · Financing on the basis of a transparent business plan

Focus on marketing/ **Financing**

JV or new financing partner, if applicable

Case 3: Construction in the final stage (completion > 85%)

Commercial real estate loans in a crisis: Is Germany facing a wave of non-performing-loans?

- · Transparency of incurred & remaining construction costs and length
- New awarding of existing contracts generally not efficient
- · Letting (up to 100%) and marketing

Rapid completion of construction if necessary "Fresh Money"

The importance of experts in crisis situations - the following questions need to be answered

Regardless of which decision is made by the lenders, it is important to base this on reliable information.

Construction costs and length

- What is the current construction status?
- How high are the remaining construction costs (according to DIN276)?
- How long will it take to finalise the development?
- Which services have already been commissioned (and on what terms) - do new service providers need to be involved?
- Ongoing construction controlling sufficient?
- Does the current service developer need to be replaced?

Construction and technical expertise required

Property valuation

- What is the (pre-)letting situation?
 - · On what terms are (rental/sales contracts) already concluded?
- What are the possible sales prices and marketing times?
 - What are the real estate risks?

Property market expertise required

Integrated restructuring/refinancing concept

- Does an integrated business plan (balance sheet & income statement) exist for the property/project company (SPV)?
- How much additional funding is required to stabilise the development in the long-term ("fresh money")?
- What is the (long-term) liquidity situation at SPV-level and, if applicable, at holding company level?
- What is the sustainable interest rate/margin?
- How can an exit/refinancing be realised in the end?

Pragmatic implementation at the level of property SPVs makes sense

Sources and other publications



- BaFin (2021). Circular 10/2021 (BA) Minimum requirements for risk management MaRisk.
- Banque centrale de Luxembourg (2024). Development of the yield on ten-year German government bonds in the years 1995-2023.
- Bas G. & Kara M. (2021). The Effect of Macroeconomic Factors on Non-Performing Loans: A Time Series Analysis for Turkey, Journal of Economics Business and Political Research.
- Bundesvereinigung Kreditankauf und Servicing e.V. & Frankfurt School of Finance and Management (2022). NPL Barometer, December 2022/Autumn 2023.
- Deutsche Bundesbank (2024). Vacancy rate for office properties in Germany in the years from 1995 to 2023. cited "statista".
- Deutsche Bundesbank (2024). Net initial yields for commercial real estate by city group.
- European Banking Authority (2024). Risk Dashboard: Q3 2023.
- ECB (2022). Banking supervision statistics for the first quarter of 2022.
- Federal Reserve Bank of St. Louis (FRED) (2023). Economic Research.
- Foglia M. (2022). Non-Performing Loans and Macroeconomics Factors: The Italian Case, Risks.
- ifo Institute (2023). ifo Institute cuts forecast for 2024 growth to 0.9 per cent.
- INFINA (2024). ECB key interest rate: history, statistics and forecast.
- Jakubik P. & Reininger T. (2013). What are the Key Determinants of Nonperforming Loans in CESEE?, Focus on European Economic Integration.
- Jones Lang LaSalle investment market overview (2024).
- PwC Germany (2020). More home, less office.
- PwC Germany (2021). Home remains office.
- · PwC Germany (2022). The future of German city centres.
- PwC Germany (2023). Home sweet home office.
- PwC Germany (2023). Retail in transition Are shopping centres still fit for the future?
- Said R. (2021). Implications of Macroeconomic Factors on Non- Performing Real Estate Loans: Case of Malaysia, International Surveying Research Journal.
- Federal Statistical Office (2023): Long-term economic development in Germany.
- Federal Statistical Office (2023): Consumer price index and inflation rate.
- Vdp | The German Pfandbrief Banks (2024). Vdp real estate price index (Q4-2023).
- The Wall Street Journal (2024). Offices Around America Hit a New Vacancy Record.
- The World Bank (2023). https://www.worldbank.org/en/home.

PwC Real Estate Transactions & Restructuring

Contact persons



Rita Marie Roland
Partner
Friedrich-Ebert-Anlage 35-37
60327 Frankfurt am Main
+49 160 96905846
rita.m.roland@pwc.com

Alexia Manukwem Senior Manager Bernhard-Wicki-Str. 8 80636 Munich +49 170 8723087

alexia manukwem@pwc.com

Joost J. Völker

Manager
Alsterufer 1
20354 Hamburg
+49 175 2110922
joost.voelker@pwc.com

© March 2024 PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft.

All rights reserved. "PwC" in this document refers to PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, which is a member firm of PricewaterhouseCoopers International Limited (PwCIL). Each of the member firms of PwCIL is a separate legal entity.

Author(s)

Rita Marie Roland | Alexia Manukwem | Joost J. Völker

Magnus Abels | Merve Markiewicz | Prof Dr Florian Hackelberg