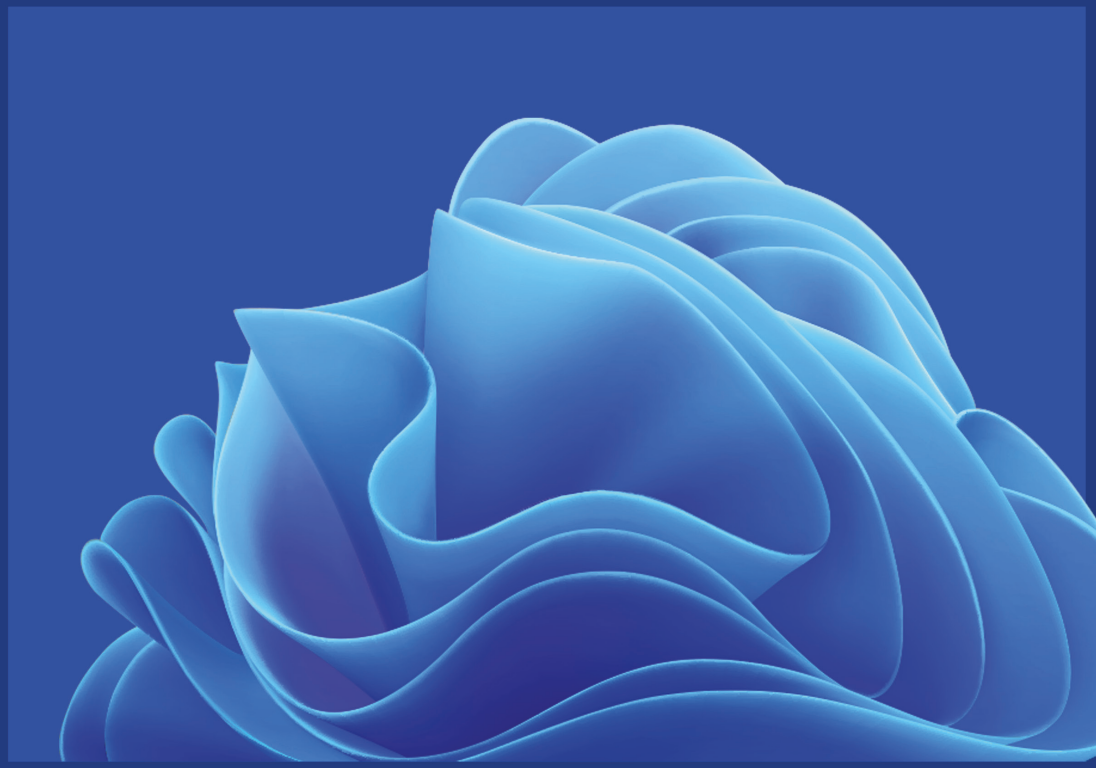
KPMG

Cost of Capital Study 2022

**Inflation at record high –
What's in for company valuations?**



This study is an empirical investigation with the aim of analyzing management practices. The information provided and explanations offered by the study do not offer a complete picture for deriving financial forecasts or costs of capital nor for proper actions or interpretation of the requirements for impairment tests, other accounting-related questions or business valuations for accounting, tax or other purposes.

When considering the following analyses, it should be noted that the company data presented here stems from companies from different countries, partially with different currencies and at varying points in time. Furthermore, it should be noted that not all participants of the study have answered all questions.

The data presented in this study does not necessarily reflect KPMG's view on future-oriented assessments or on the cost of capital in the survey period.

Preface

Dear Reader,

It is our pleasure to present you with the results of the seventeenth edition of our Cost of Capital Study. With 321 participating companies, we were again able to attract a very large number of participants. We would like to express our heartfelt gratitude to all those companies that took part despite the unprecedented circumstances of the COVID-19 pandemic as well as the Russia-Ukraine war and all the associated challenges for businesses. The large number of participants demonstrates once more that the study continues to be a fixed component in your valuation practice. We therefore hope that this year's study and the key topics contained therein will be of particular interest to you.

In recent weeks and months, capital markets have developed very dynamically, driven in particular by rising inflation rates due to the circumstances mentioned above. Consequently, we have chosen the title "Inflation at record high – What's in for company valuations?" for this year's Cost of Capital Study. While the survey period of the study does not reflect the latest capital market developments, these are addressed by the evaluation of the individual cost of capital parameters. Additionally, the current issue of the study focuses on the following subjects:

- Value enhancement through inflation?
- Disruptive times in the energy sector – what's the impact of inflation and cost of capital?
- Inflation is back – and what about the cost of capital?

As a reference point, the collection of empirical data provided by the participants is based on the IFRS (International Financial Reporting Standards) impairment test, as this test itself and its related valuations are mandatory for all IFRS users.

Supplementary to the current study, we would like to draw your attention to the interactive version of the report. The interactive version allows you to compile your own parameters relevant to your company and / or industry so that you can obtain a personalized industry assessment.

Furthermore, with **KPMG Valuation Data Source** you have access to reliable parameters on the cost of capital for more than 150 countries – anywhere and anytime.

We hope that this year's Cost of Capital Study also meets your expectations and serves as interesting reading. We will gladly discuss the results with you within the framework of a personal appointment and are, of course, available for any questions and comments you may have.

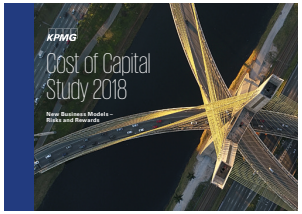
With best regards,

Stefan Schöniger
Partner
Deal Advisory, Valuation
KPMG AG
Wirtschaftsprüfungsgesellschaft

Heike Snellen
Director
Deal Advisory, Valuation
KPMG AG
Wirtschaftsprüfungsgesellschaft

Dr. Andreas Tschöpel
Partner
Deal Advisory, Valuation
KPMG AG
Wirtschaftsprüfungsgesellschaft

Editions of the Cost of Capital Study by KPMG



2018

- Innovative business models – opportunity and risk at the same time
- Disruptive business models – one person's joy, another's suffering
- Internationalization of business models –
- opportunity and risk at the same time
- The optimal company portfolio – necessity of quantifying strategies

2019

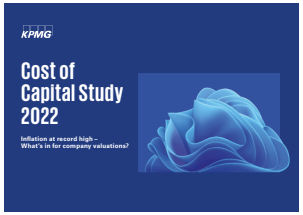
- Changing markets and industries?!
- A changing landscape for the automotive industry
- Data driven omni-channel models
- Chemical industry and the challenge of climate change
- Finding the balance in industry 4.0

2020

- The world is changing
- Goodwill – steady in turbulent times?!
- Unusual times – new valuation methods?

2021

- ESG impacts in valuations in the consumer markets sector
- Essential changes to ESG reporting
- Make good decisions in the ESG environment



2022

- Value enhancement through inflation?
- Disruptive times in the energy sector – what's the impact of inflation and cost of capital?
- Inflation is back – and what about the cost of capital?

Summary of Findings

Growth expectations

The growth expectations continue to be influenced by the Russia-Ukraine war, the persistent COVID-19 pandemic as well as the development of new technologies and political and economic instabilities. The strongest growth expectations can be observed in the Technology, Automotive and Health Care sector. *Page 15*

Planning uncertainty

In uncertain times like these, it is even more important to consider a number of risks when performing financial forecasts. Compared to the previous year, participating companies attributed significantly greater importance to political risks (macroeconomic) and supply-side risks (microeconomic). *Page 21*

WACC

Compared to the previous year, the average WACC across industries increased from 6.6 percent to 6.8 percent. The WACC increase is in line with development in the various sectors. The strongest increase was observed in the Transport & Leisure sector, whereas the largest decline was seen in the Technology sector. *Page 23*

Risk-free rate

The average risk-free rate increased by 0.1 percentage points to 0.3 percent in the survey period. In Germany and Austria, the risk-free rate increased from 0.1 percent in 2020/2021 to 0.2 percent in 2021/2022. The risk-free rate in Switzerland declined by 0.2 percentage points to 0.7 in 2021/2022. In recent months, the risk-free rate has further increased significantly. *Page 25*

Beta factors

The highest unlevered beta factors were applied by the Technology sector, followed by the Automotive sector. The lowest unlevered beta factor was applied by participating companies within the Energy & Natural Resources sector. *Page 29*

Cost of debt

The average cost of debt applied by participating companies further declined from 2.1 percent to 2.0 percent in the survey period. Thus, the observable downward trend continues. *Page 33*

Market risk premium

The average market risk premium of 7.2 percent remained at the same level as in the previous year. While the market risk premium slightly increased from 7.3 percent to 7.4 percent in Germany and from 6.1 percent to 6.2 percent in Switzerland, the market risk premium significantly declined in Austria from 8.0 percent to 7.5 percent. *Page 26*

Impairment test

The most recent period shows a decline in the number of companies recognizing an impairment to a comparable level observed in the years before the COVID-19 pandemic. *Page 40*

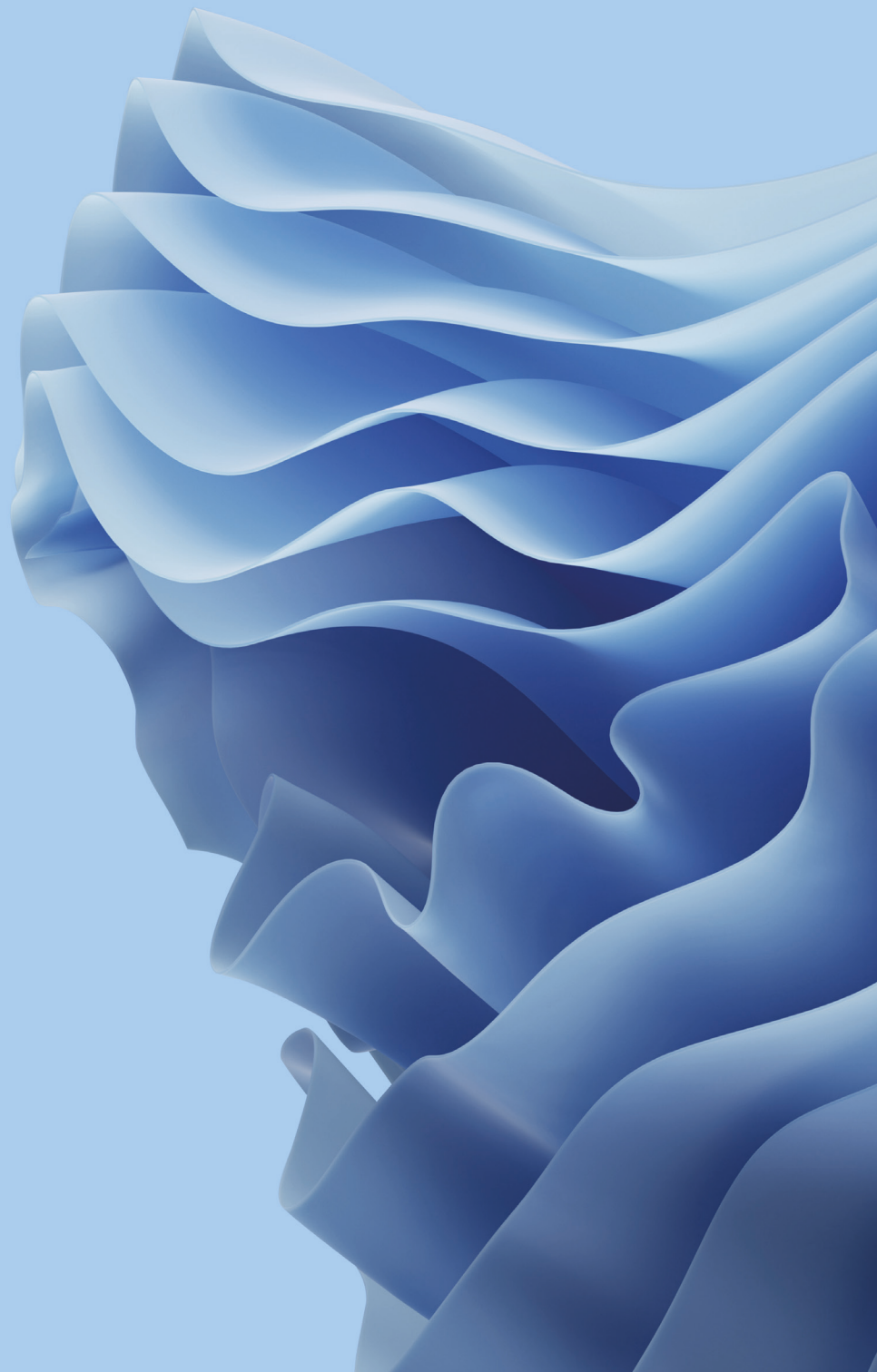
Triggering event

While nearly a half of the participating companies conducted an extraordinary impairment test (based on a so-called triggering event) last year, only one third of the respondents performed an impairment test based on a triggering event this year. *Page 41*

Sustainability

The importance of ESG for companies has significantly increased over the past few years. Compared to previous year, the relevance of ESG issues increased in most industries. As in the previous year, ESG impact is particularly high in industries where environmental issues play a key role. *Page 46*

1 Introduction



1.1 Overview of Participating Companies

Study participants

The total number of participating companies in this year's Cost of Capital Study amounts to 321 (previous year: 332) including 239 from Germany, 30 from Austria and 52 from Switzerland. Hence again, the study has attracted a very large number of participants.

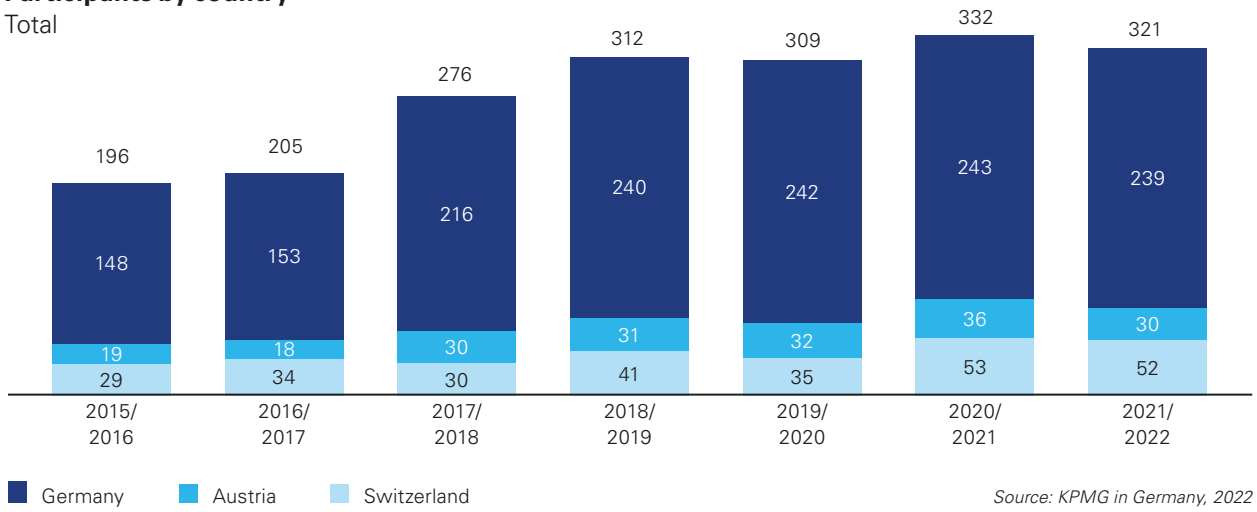
From the DAX-40, 73 percent of the companies who participated in this year's study are listed on the DAX-40 which corresponds to 29 companies. The participation rate of companies listed on the MDAX reached a total of 45 percent. Compared to the previous year, the Cost of Capital Study reflects the expansion of the DAX from 30 to 40 and the reduction of the MDAX from 60 to 50 companies.

The response ratio for companies listed on the ATX and on the SMI decreased to 55 percent and 40 percent, respectively.

Survey period

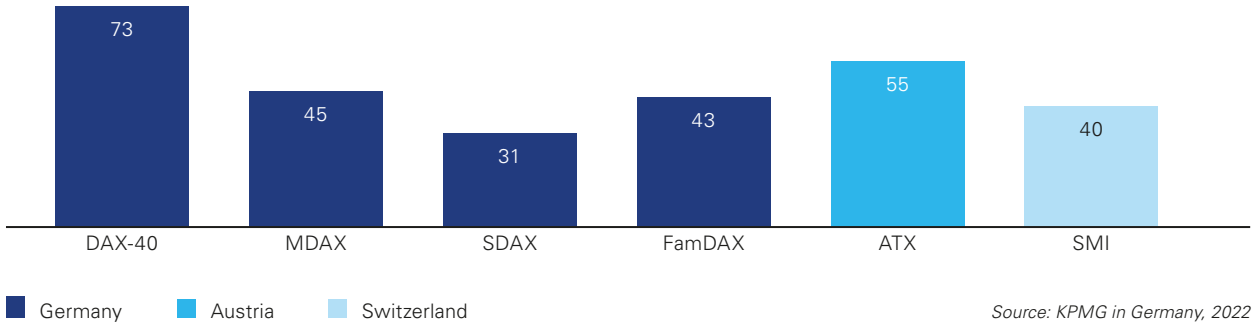
The period during which companies had the opportunity to participate in the survey for this year's study was between April and July 2022. The reporting dates of consolidated financial statements considered were between 30 June 2021 and 30 April 2022 (survey period).

Figure 01:
Participants by country
Total



Source: KPMG in Germany, 2022

Figure 02:
Participation rates by market index
(in percent)



Source: KPMG in Germany, 2022

Analyses

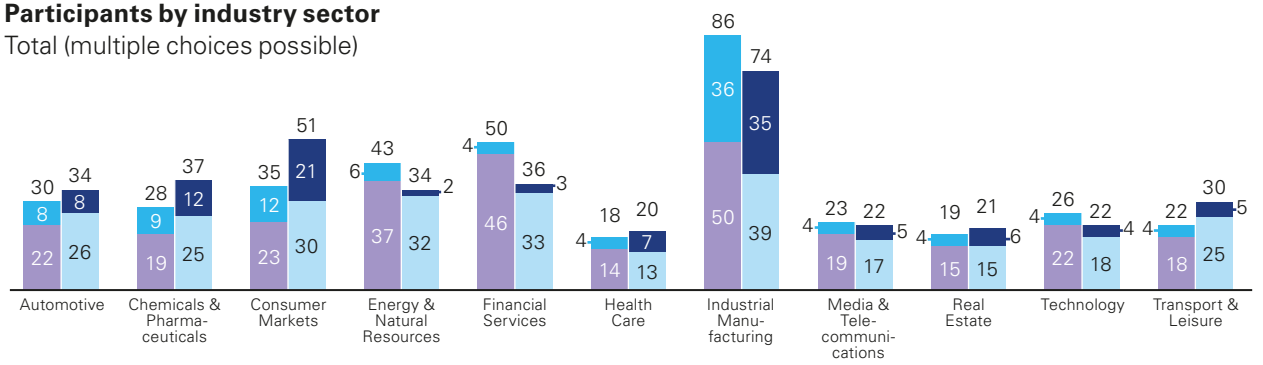
Within the study, the participating companies were asked to allocate themselves to selected industries in conformity with their operating activities. This enables a differentiation as well as a comparison of the industries concerning material parameters for financial forecasting and cost of capital.

Compared to the previous year's study, the number of participants within the Consumer Markets and Transport & Leisure industry increased. As these two industries were particularly affected by the COVID-19 pandemic, rising participation numbers could be the result of a potential recovery. In addition, participation numbers increased in the Chemicals and Pharmaceuticals industry.

In contrast, the number of participants within the Financial Services and Energy & Natural Resources industry significantly decreased. Regarding the Energy & Natural Resources industry, the decline could be linked to the Russia-Ukraine war, as this industry sector has been particularly affected by its consequences.

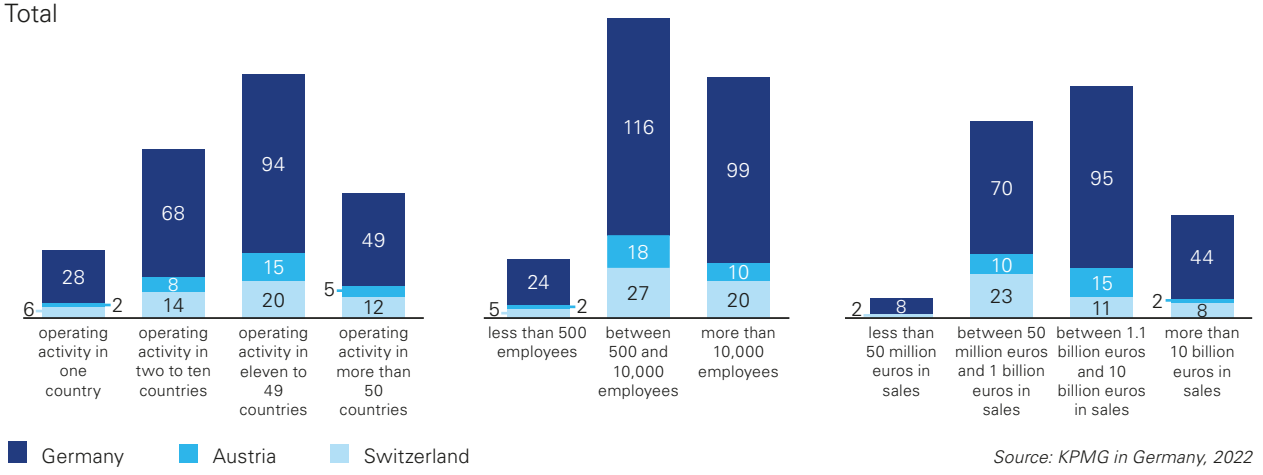
The companies participating in the Cost of Capital Study were primarily medium to large companies that operate in more than 10 countries, with more than 500 employees and generating revenues over EUR 50 million.

Figure 03:
Participants by industry sector
Total (multiple choices possible)



Source: KPMG in Germany, 2022

Figure 04:
Participants by number of countries where they operate, by number of employees and by revenue
Total



Source: KPMG in Germany, 2022

1.2 Online Industry Analyses

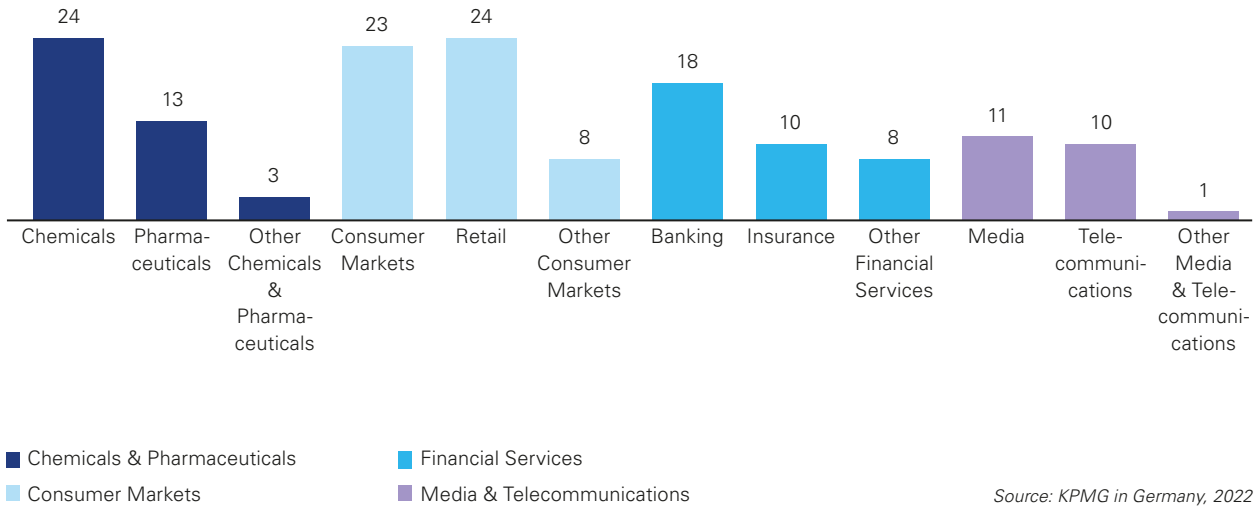
The results of the Cost of Capital Study 2022 as well as studies from previous years are accessible via the following link: **www.kpmg.de/cost-of-capital-study**.

The results provide a detailed overview of the financial forecasts and cost of capital parameters for each industry sector, with sub-sectors, and include Chemicals & Pharmaceuticals, Consumer Markets, Financial Services, and Media & Telecommunications.

An interactive version of the study is available online. Search criteria can be individually chosen to generate the desired output and enable customized analyses such as historical developments of cost of capital parameters for certain industries or countries. Additionally, it is possible to filter and differentiate the results by company size.

Further insights on the performance of impairment tests are also available on the website (note also chapter 4 for selected results on this topic).

Figure 05:
Participants by sub-sector
Total (multiple choices possible)



Source: KPMG in Germany, 2022

Value enhancement through inflation?

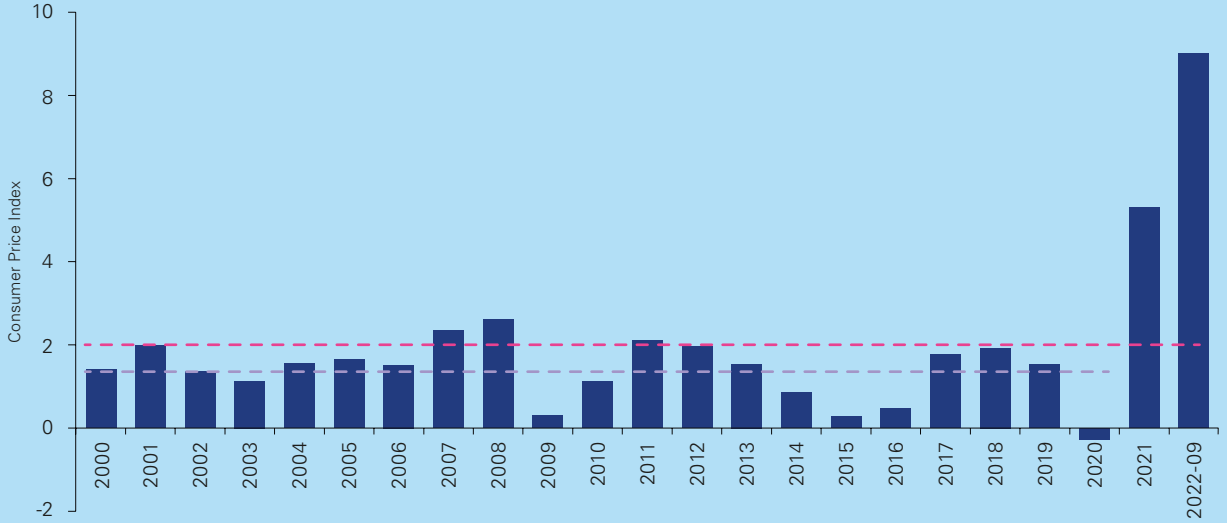
Rising inflation in Europe

Europe – like the rest of the world – is currently being affected by very high inflation rates. Reasons for this are the ultra-loose monetary policy of the European Central Bank (ECB) in response to the crises within the last 15 years (financial crisis 2009, sovereign debt crisis 2012, COVID-19 crisis 2020 and Russia-Ukraine war 2022) as well as the disruptions to global supply chains and shortages of raw materials triggered by the COVID-19 crisis and Russia-Ukraine war.

The chart to the right impressively shows the inflation trend in Germany since the turn of the millennium. With a few exceptions, the annual inflation rate was significantly below the ECB's target of around 2 percent – on average (2000 to 2020) just 1.4 percent. In the same period, stock and real estate prices more than doubled. While 2020 was characterized by a declining price level – also due to the unprecedented effects of the COVID-19 crisis – 2021 already showed a significant price increase of more than 5 percent; more recent estimates expect an increase in the range of 10 percent for 2022.

Even the European Central Bank now agrees with the majority of economists who see a medium- or even long-term effect on price increases instead of a short-term effect.

Figure 06:
Inflation trend in Germany since 2000
(in percent)



Source: Federal Statistical Office of Germany, Consumer Price Index

Against this background, it seems necessary to address the effect of inflation in valuation models – a question that has not been discussed in the last 20 years of valuation practice.

Inflation in valuation models

Valuation models follow a number of necessary equivalence principles, whereof one of the best known and most important one is the risk equivalence principle. With increasing inflation, an equivalence principle that has been less present in recent years comes to the fore – purchasing power equivalence.

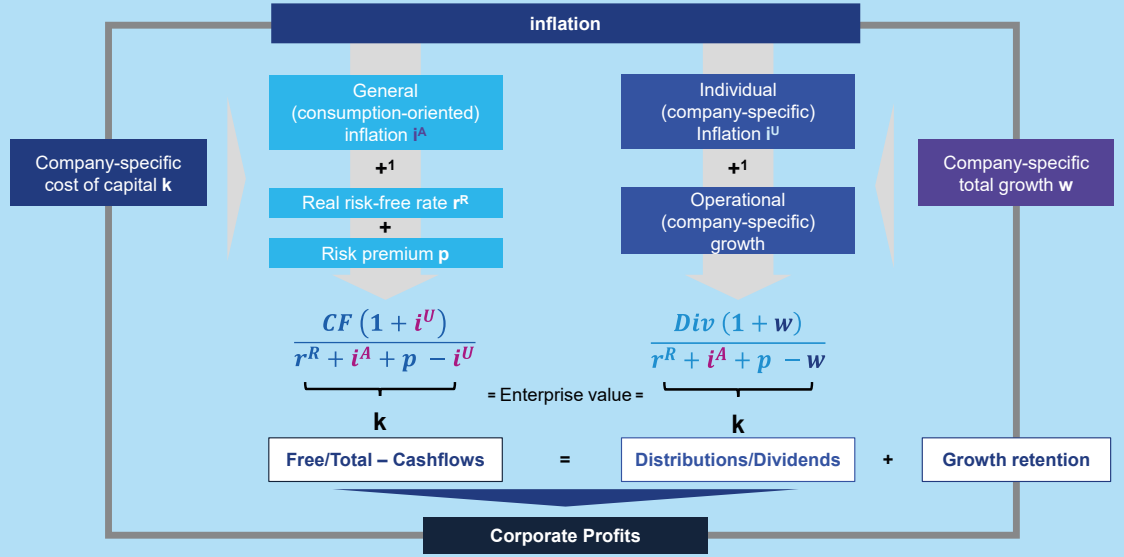
To adequately take this into account, it is common practice to discount nominal cash flows (CF) with so-called nominal returns (left side of the chart). Here, the cash flows to be valued grow at a company-specific inflation rate, which is essentially determined by the company's operating business model, its cost structure, and its industry. The return required by investors, expressed in the required company-specific cost of capital, on the other hand, accounts for a compensation of the general (consumption-oriented) inflation affecting investors on average through a premium on the real risk-free rate.

Against the background of considering inflation-driven components in the cash flows and the return requirements, different scenarios can be derived from the simple mechanics of calculating present values.

Assuming a relatively stable real risk-free rate and a stable risk premium, the impact of inflation on the enterprise value depends on the ratio of general (consumption-oriented) inflation to company-specific inflation. In this case, the nominal risk-free rate and the nominal return required by investors would generally increase as inflation rises.

However, recent years have shown that – encouraged by the ECB's interest rate policy – the nominal risk-free rate was nearly fixed at zero and thus the real risk-free rate was forced into a negative range.

Figure 07:
Inflation in the valuation model



[1] Simplification: $r^N \approx r^R + i^{\cdot}$, Precise calculation: $r^N = (1 + r^R)(1 + i^{\cdot}) - 1$

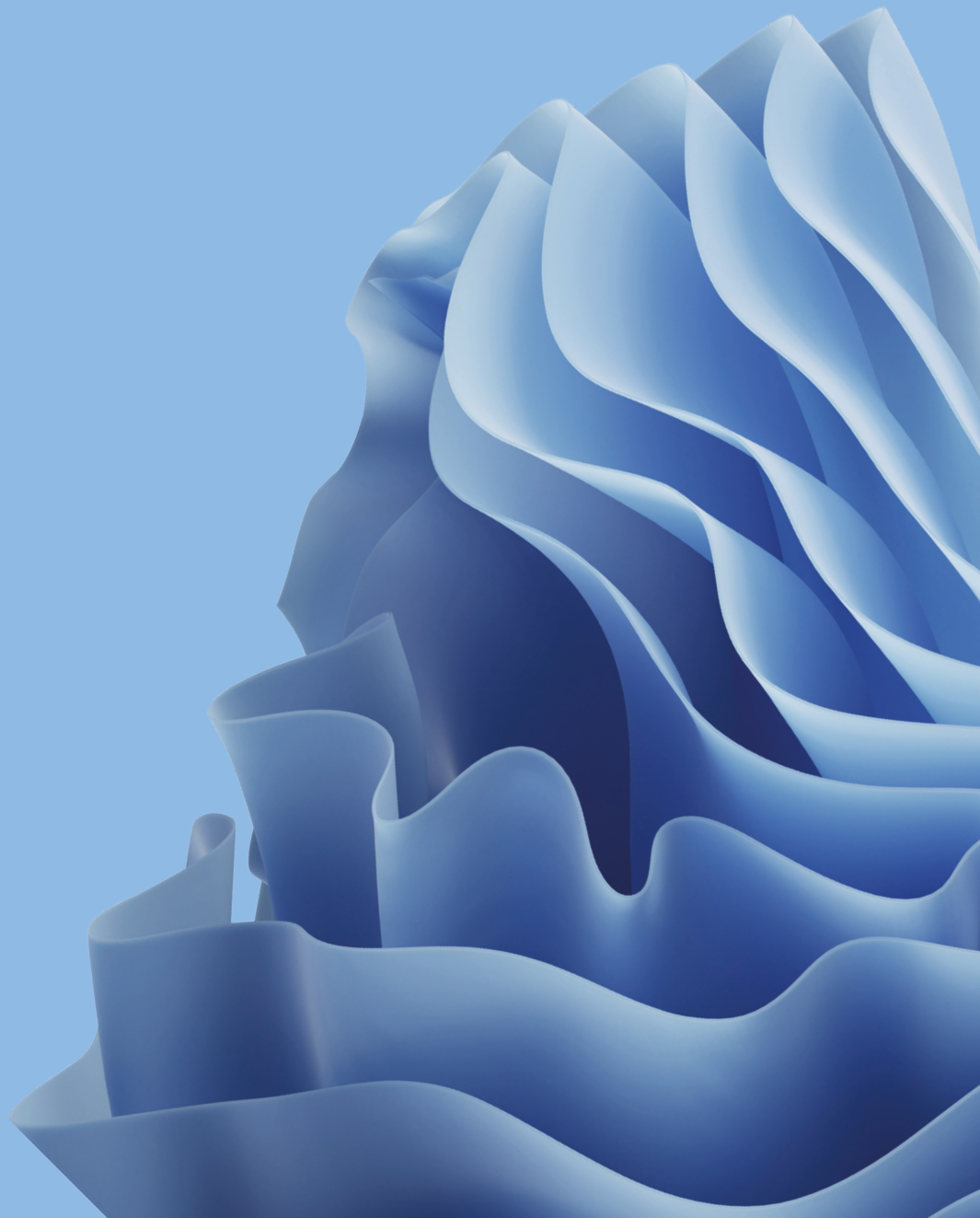
Source: KPMG in Germany, 2022

Ceteris paribus, this would lead to an inflation-related growth in enterprise values, since a rising company-specific inflation rate leads to a correspondingly reduced capitalization rate (nominal total return ./. growth rate), provided that the nominal total return required by investors remains relatively stable. Although the now clearly prevailing inflation is already accompanied by an increasing risk-free rate, this has not yet compensated for the high inflation rates.

Countervailing effects would set in as soon as the return required by investors would rise again due to an increase in the nominal interest rate level. In our article on p. 37f. we explain how the relationships described here interact against the background of the current capital market situation.

2

Derivation of Cash Flows



2.1 Preparation of the Financial Forecasts

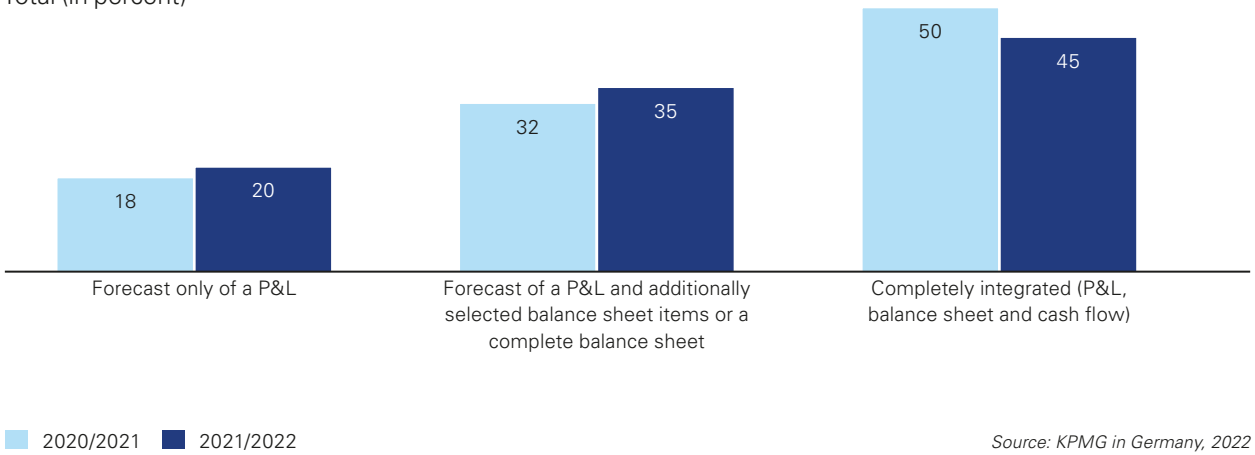
Economic developments are difficult to predict, especially in uncertain times like these. Therefore, financial forecasts are subject to a certain degree of planning uncertainty.

To increase the planning accuracy of financial forecasts, it is necessary to properly reflect on expectations regarding operating performance and risk drivers. Additionally, accuracy can be increased by preparing financial forecasts in an integrated manner with a sufficient level of detail.

Sensitivity and scenario analyses can address future fluctuations in a company's performance and therefore provide a suitable framework to account for uncertainty in company valuations.

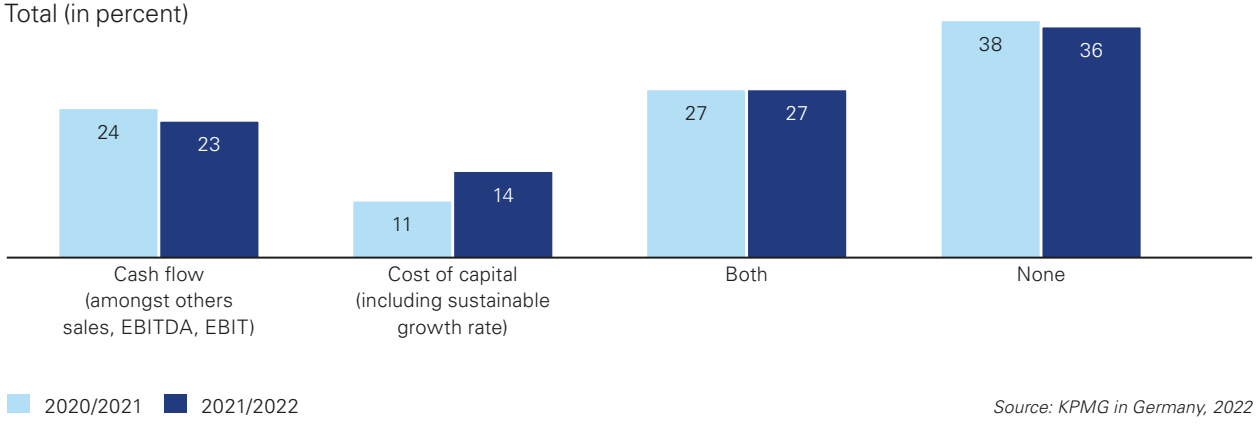
The consideration of cash flow sensitivities simultaneously requires an adjustment in the cost of capital. This adjustment is necessary to ensure risk equivalence of the numerator and denominator for unbiased valuation results.

Figure 08:
Degree of detail of the financial forecast
Total (in percent)



Source: KPMG in Germany, 2022

Figure 09:
Consideration of sensitivities
Total (in percent)



Source: KPMG in Germany, 2022

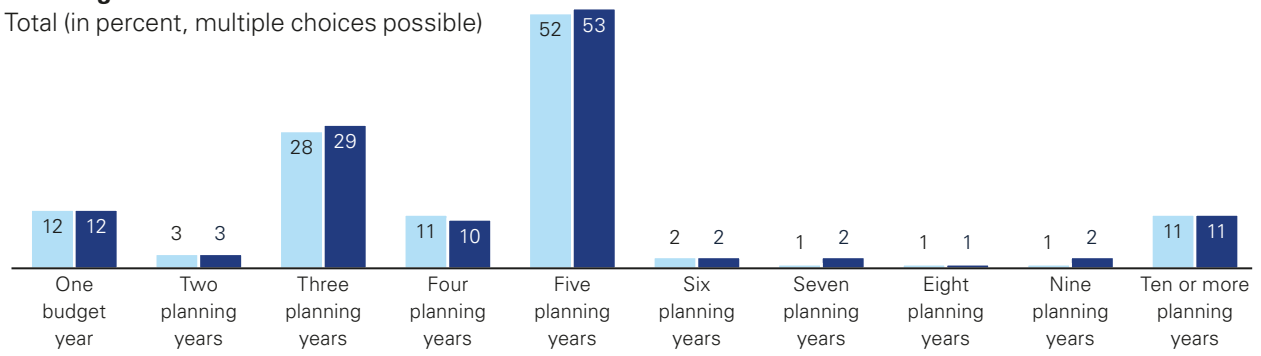
The choice of the planning period inherently includes some incongruity. A longer planning horizon implies a higher degree of planning uncertainty, while a (too) short planning horizon results in investment and product life cycles as well as long-term industry developments not being adequately reflected in the financial forecast. As a result, this may lead to erroneous company valuations which, at worst, are used for further-decision making.

According to International Accounting Standard (IAS) 36.33 (b), the planning horizon of the financial forecast should not exceed a five-year period when applying the value-in-use concept. An extended planning horizon may be justified depending on product and investment cycles.

The survey revealed a slight trend towards longer planning periods, as the application of planning periods of five years, seven years and nine years each increased by one percentage point. This trend towards longer planning periods could be the result of the disruptions of global supply chains and shortages of raw materials triggered by the COVID-19 pandemic and the Russia-Ukraine war.

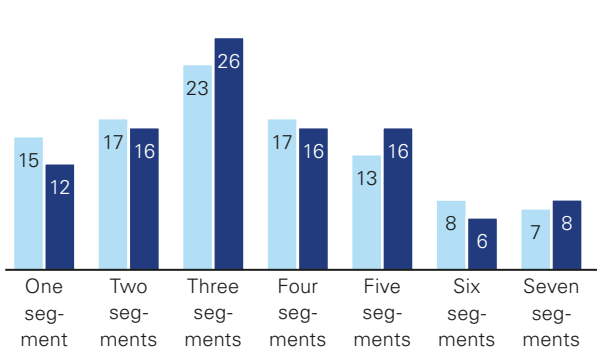
The number of segments as well as the number of CGUs of the participating companies have not changed significantly compared to the previous year.

Figure 10:
Planning horizon
Total (in percent, multiple choices possible)



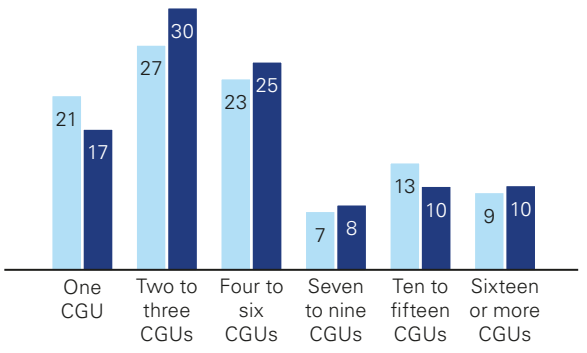
Source: KPMG in Germany, 2022

Figure 11:
Number of segments
Total (in percent)



Source: KPMG in Germany, 2022

Figure 12:
Number of cash generating units (CGUs)
Total (in percent)



Source: KPMG in Germany, 2022

2.2 Growth Expectations

Today's growth expectations are dominated by concerns regarding the effects of the Russia-Ukraine war on the world economy, especially due to rising energy costs, as well as the ongoing COVID-19 pandemic, which together exacerbate existing raw material shortages. Furthermore, the continuous development of new technologies reshapes existing industries and creates new opportunities. These factors present challenges and opportunities and can affect the growth rates of industries very differently.

Compared to previous year's study, the Automotive sector significantly increased its growth expectations by 2.1 percentage points for sales and by 2.9 percentage points for EBIT. On the one hand, this could be related to an expected improvement of the semiconductor shortage and on the other hand, to an increasing global demand for e-mobility. Additionally, increases in growth expectations can be observed for the Technology sector which is in line with the continuing digitization trend as well as for the Travel & Leisure sector which is possibly due to recovery-effects from the COVID-19 pandemic. While an increase in growth expectations can be observed for most industries, the Media & Telecommunications sector expects a significant decline in growth expectations.

Overall, the average expected sales growth increased by 0.6 percentage points. Simultaneously, the average forecasted EBIT growth increased by 0.7 percentage points.

Figure 13:
Forecasted sales growth by industry
(in percent)

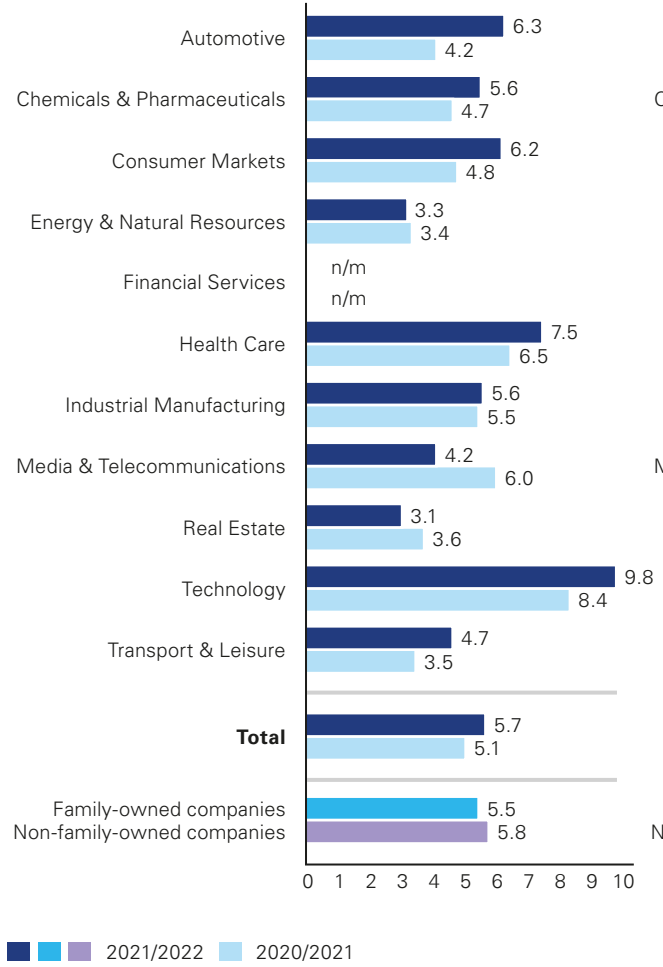
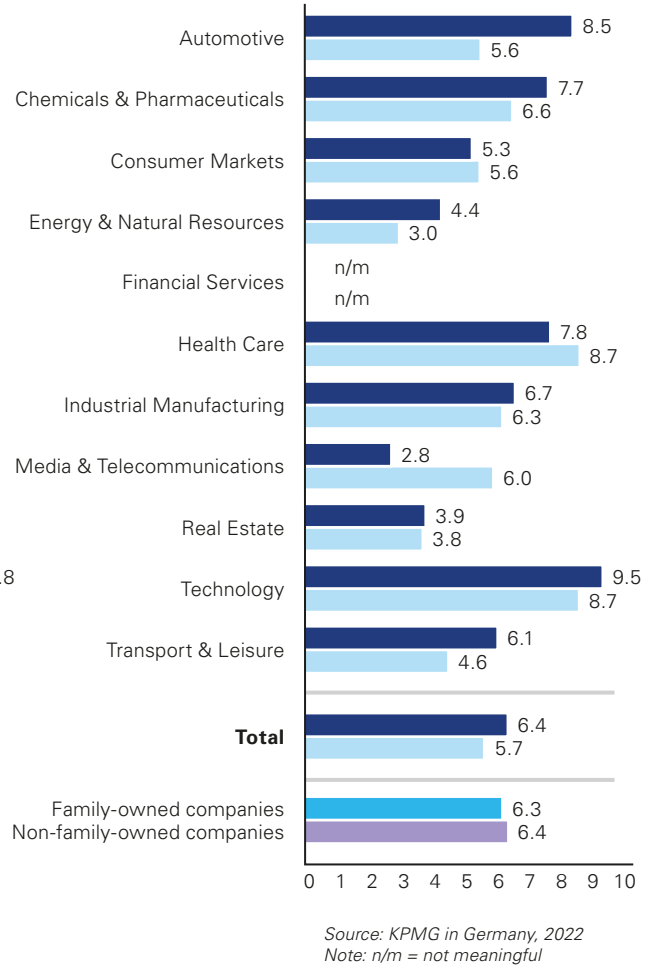


Figure 14:
Forecasted growth of EBIT by industry
(in percent)



Source: KPMG in Germany, 2022
Note: n/m = not meaningful

Disruptive times in the energy sector – what's the impact of inflation and cost of capital?

In the article "Inflation is back – and what about the cost of capital?" on p. 37f. we addressed the current impact of inflation on the cost of capital and the expected returns reflected therein. In the remainder of this article, we discuss the specific challenges for the energy industry resulting from the current developments in inflation and expected returns. Even before the current challenges posed by the Russia-Ukraine war and the associated significant reduction in gas supplies from Russia, the energy industry was already undergoing a fundamental transformation, primarily due to the general efforts to overcome the climate crisis. In the course of the year 2023, the phase-out of nuclear power in Germany will be completed and the legally anchored phase-out of coal-fired power generation is to be advanced by 2038 at the latest. By 2030, 80 percent of electricity demand in Germany is to be covered by renewable energy sources, which requires substantial investments in plants for the generation, storage, and transport of renewable energy. As a further contribution to decarbonize the economy, the German government aims to significantly expand electrolysis capacity and thus to position Germany as a lead market for hydrogen technology by 2030.

Investments required for the restructuring of the energy sector are primarily to be shouldered by the companies in the energy sector. When assessing investments and the associated expected investment returns, two determinants play an important role: the length of the time horizon in which investments are to be amortized given planned returns, as well as the uncertainty concerning the amount of the annual returns from the investments made.

Major investments in this sector only pay off after very long periods of time. Investments made in electricity and gas grids as well as in conventional and renewable power generation plants are often planned with a useful life of 30 to 40 years. However, the higher the uncertainty, the lower the value contributions from the distant future are to be considered in valuations. Consequently, valuations of long-term investment projects are more sensitive to changes in risk assessments and the cost of capital. Even if average revenue expectations remained unchanged, valuations would decrease simply due to increased uncertainty, which may lead to a reassessment of pending investment decisions as well as to write-downs of existing assets from investments already made.

Particularly against the background of the Russia-Ukraine war and the cut-offs of gas supplies by Russia, the need for investment to guarantee supply security within Germany is increasing. Investment decisions to be made under simultaneous crisis situations are subject to higher uncertainty regarding long-term returns from investments as well as higher inflation expectations and to (crisis-related) higher costs of capital. High investment uncertainties can be an incentive to delay macroeconomically urgently needed investment decisions for business management reasons.

Given the ongoing energy transition and the associated higher demand for electricity transport within Germany as well as greater flexibility of both electricity supply and demand, the Network Development Plan 2035 ("Netzentwicklungsplan 2035" or "NEP 2035") was developed by the transmission grid system operators 50Hertz, Amprion, TenneT and TransnetBW with subsequent review by the Federal Network Agency ("Bundesnetzagentur" or "BNetzA"). For transportation of wind energy from northern Germany and from offshore parks to the southern centers of consumption, the NEP 2035 predicts investments of over €105 billion for the improvement of electricity transmission grids alone. Additionally, significant investments in electricity distribution grids as well as gas and hydrogen infrastructure will be required in the coming years.

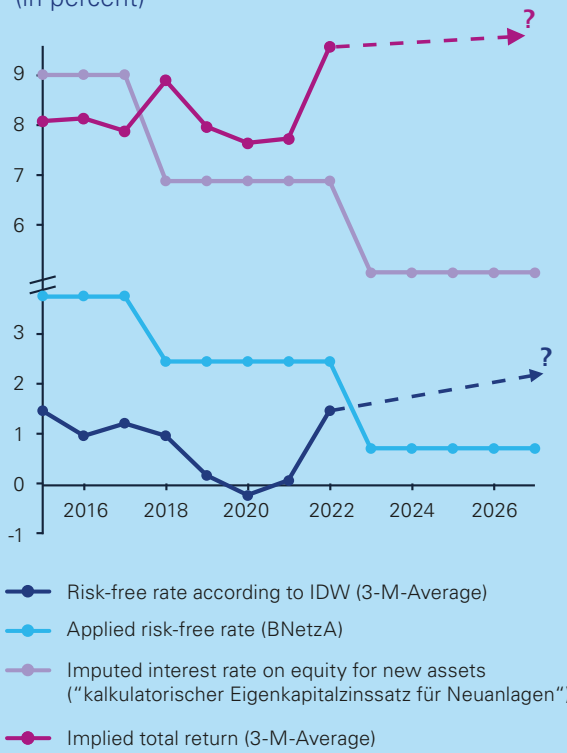
However, unlike, for example sales and electricity generation, which take place within a competitive framework, the transport and transmission of electricity and gas constitutes a natural monopoly due to high investment requirements which do not allow for parallel structures.

To prevent monopoly profits from the transmission of electricity and gas at the expense of private, commercial, and industrial customers, revenues generated from the transmission are regulated by the BNetzA. Thus, a part of the revenues for transmission and distribution facilities are determined by the BNetzA based on an imputed interest rate on equity ("kalkulatorischer Eigenkapitalzinssatz") set for several years in advance. The imputed interest rate on equity is set in accordance with the electricity and gas ordinance of grid charges for a regulatory period of five years, respectively. The third regulatory period will last until 31 December 2022 for electricity grids and until 31 December 2023 for gas grids. The imputed interest rate on equity determined for the following regulatory period from 2023/2024 to 2027/2028 was already significantly reduced in 2021 compared to previous regulatory periods without knowledge or expectation of the uncertainties and inflation rates that have increased sharply in the meantime.

Imputed returns on equity that reflect historical uncertainties and inflation rates, on the one hand, and the dynamic development of the cost of capital as a result of the crisis reflecting current uncertainties and inflation expectations, on the other hand, can lead to urgently needed investments no longer being economically viable from the grid operator's point of view. This is because regulated revenues for electricity and gas grids are determined several years in advance based on imputed interest rates on equity determined on a specific date reflecting historic data. If the imputed interest rate on equity determined and the return expectations on the market diverge, investments in grids may become less attractive from the operator's point of view. Furthermore, rising inflation can cause additional costs for the operator (e.g., IT and personnel), not being fully compensated or only with time shift by the regulated revenues, as these are also determined in advance on the basis of ex ante inflation expectations.

For the energy supply companies, the current crisis situation presents a heterogeneous picture: on the one hand, the currently high energy prices can lead to additional revenue opportunities through temporarily higher sales prices with procurement volumes that are possibly already fixed in prices. On the other hand, rising procurement costs as well as inflation-related higher operating costs, especially in the case of already fixed sales prices (e.g., by means of power purchase agreements or in regulated markets), burden profitability and, together with higher cost of capital, can result in increased impairment risks. For the attractiveness of investments in electricity and gas transmission and distribution grids, it is of particular importance whether the BNetzA will subsequently adjust the already determined imputed interest rate on equity for the next regulatory period in view of high inflation and increased cost of capital.

Figure 15:
Interest rate developments
(in percent)



Source: : German Central Bank, Federal Statistical Office of Germany, BNetzA, KPMG Analysis

2.3 Inflation Expectations

As outlined in our article "Value enhancement through inflation?“ on p. 10f., Europe is currently affected by very high inflation rates. Since the turn of the millennium the inflation rate in Germany has, with few exceptions, been well below the ECB's target of around 2 percent. In the years 2021 and 2022 however, significant price increases have been observed.

In line with these recent observations, the vast majority of participants expects a short-term inflation rate (i.e. within the next two years) of at least 2 percent for their company. The highest short-term inflation expectations can be observed among participants within the Industrial Manufacturing sector. In contrast, participants within the Health Care Sector have the lowest short-term inflation expectations.

In the mid-/ long-term (i.e. from the third planning year onwards) the majority of participants expects the inflation rate for their company to be in a range between 1 percent and 3 percent.

The main causes for the strongly rising inflation rates were cited by participating companies as being high energy prices, scarcity of resources and geopolitical crises. In addition, more than half of the participating companies believe that the central bank’s monetary policy could be a reason for increasing inflation rates.

Figure 16:
Short-term company-specific inflation expectations
(in percent)

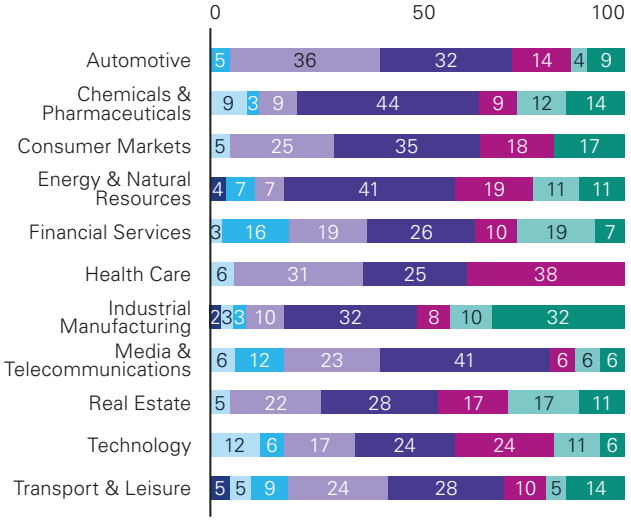
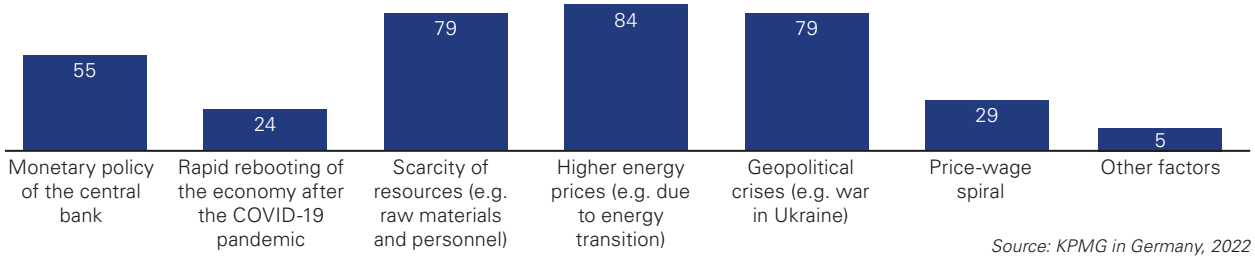


Figure 17:
Mid-/Long-term company-specific inflation expectations
(in percent)

Source: KPMG in Germany, 2022

Figure 18:
Main drivers of the current rising level of inflation
Total (in percent, multiple choices possible)



Source: KPMG in Germany, 2022

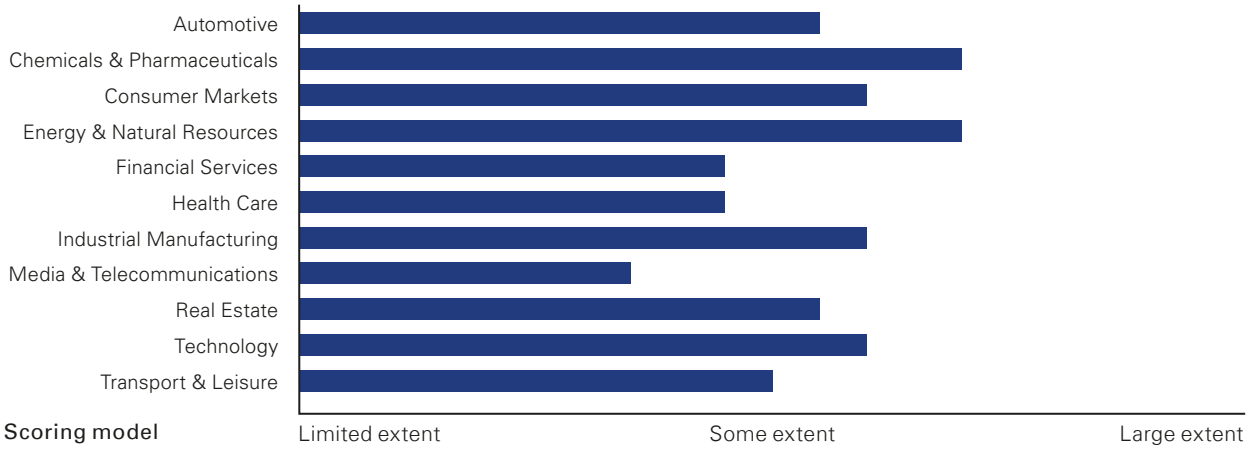
The impact of inflation on a company largely depends on the extent to which it can pass on its company-specific inflation-related cost increases to (end-) customers. Based on a scoring model ranging from "inflation-related cost increases can be passed on to a limited extent" to "inflation-related cost increases can be passed on to a large extent" it can be observed that in all industries inflation-related cost increases can only partially be passed on to (end-) customers.

Furthermore, the ability to pass on inflation-related cost increases strongly varies between industries. Participating companies in the Chemicals & Pharmaceuticals and the Energy & Natural Resources industry sectors have a comparatively better ability to pass on inflation-related cost increases than those in the Media & Telecommunications sector.

The ability to pass on inflation-related cost increases is central to the question of how inflation impacts company valuations.

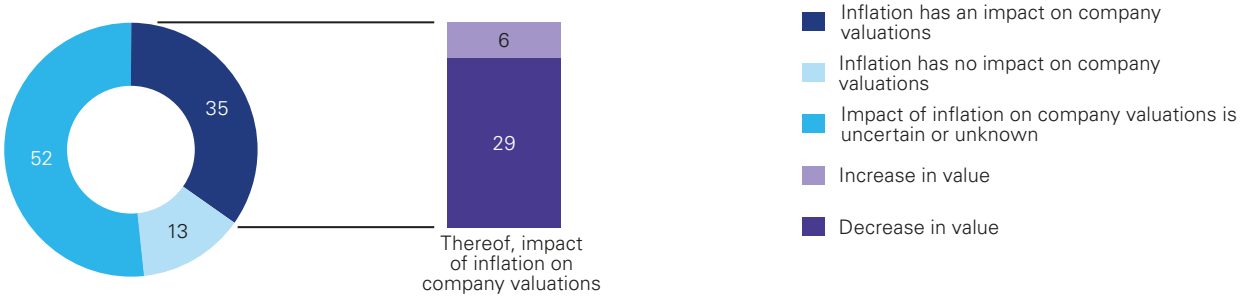
Overall, 35 percent of the participating companies are aware of the impacts inflation has on company valuations. More precisely, 29 percent of the participating companies expect that inflation has a negative impact, while 6 percent expect a positive impact. The majority of participating companies however does not know whether or how rising inflation rates affect the valuation of their company.

Figure 19:
Ability to pass on inflation-related cost increases to customers
Total (Scoring)



Source: KPMG in Germany, 2022

Figure 20:
Impact of rising inflation rates on company valuations
Total (in percent)



Source: KPMG in Germany, 2022

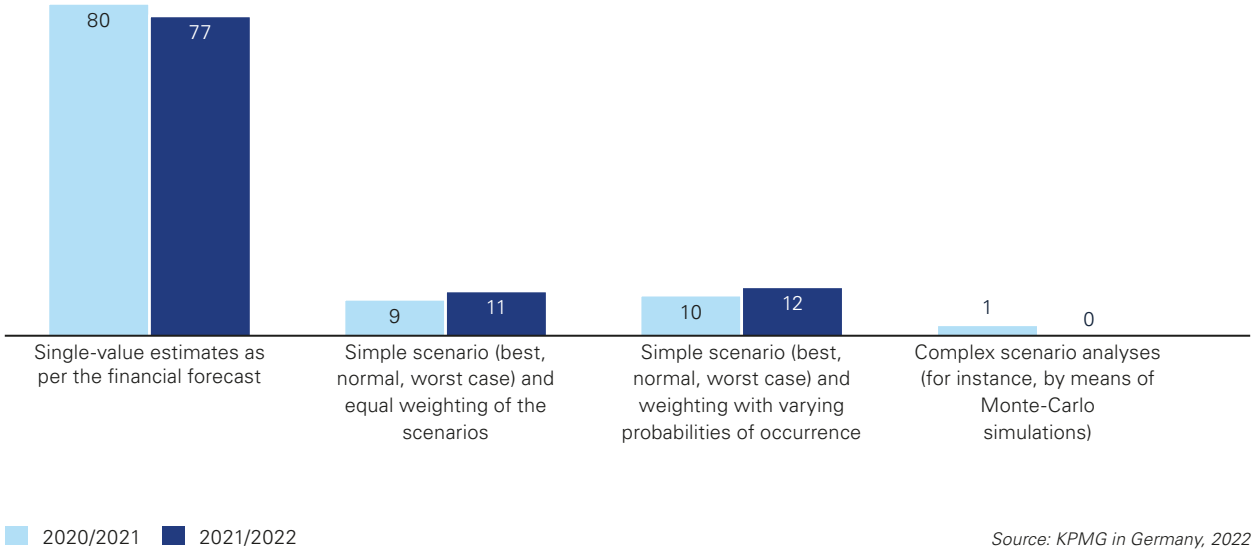
2.4 Determination of Expected Values

While single-valued estimations of future cash flows might have been a sufficient forecasting tool for companies in the past, they are not a suitable tool for an environment characterized by high uncertainty.

In such economic environments, the performance and risk drivers can only be systematically and transparently addressed by using multi-valued estimations based on scenarios and simulations. Hence, it is necessary to use a multi-valued approach as business models are affected by difficulties in predicting macro- and microeconomic developments and short-term distortions.

As in the previous year, most of the participating companies use single-value estimates for determining future cash flows. This shows that alternative scenarios and thus future performance and risk changes of the prevailing business model are predominantly not being adequately taken into account in the derivation of expected values. Compared to the previous year, however, the number of participating companies that determine cash flows using simple scenarios increased.

Figure 21:
Measurement of expected values
Total (in percent)



Source: KPMG in Germany, 2022

2.5 Consideration of Risks

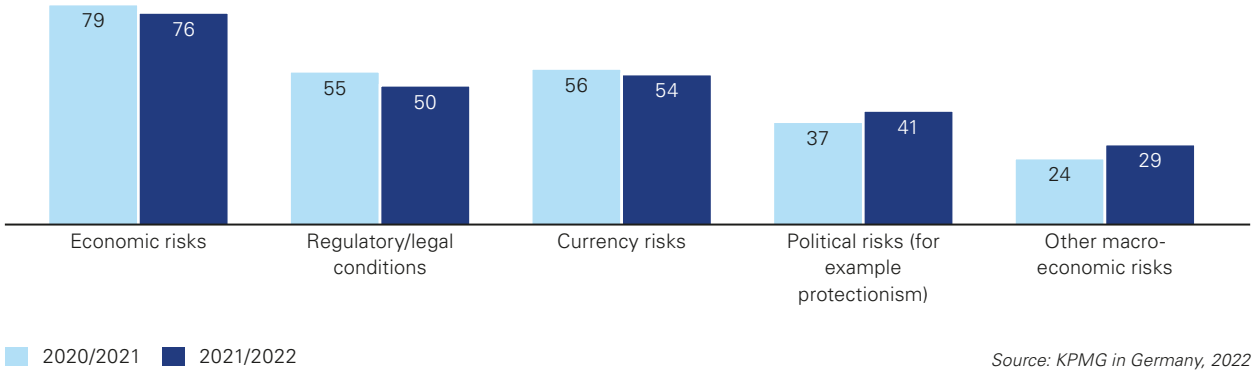
Future cash flows are characterized by uncertainty and must therefore be determined by their expected value.

To increase the accuracy of expected values, all relevant opportunities and risks associated with the business model, which can be micro- or macroeconomic in nature, have to be taken into consideration when compiling the financial forecast.

The current situation highlights the importance of considering an increased number of risks when preparing financial forecasts. With regards to the macroeconomic risks, we observed that more companies take political risks and other macroeconomic risks into account compared to the previous year which is likely the result of the Russia-Ukraine war.

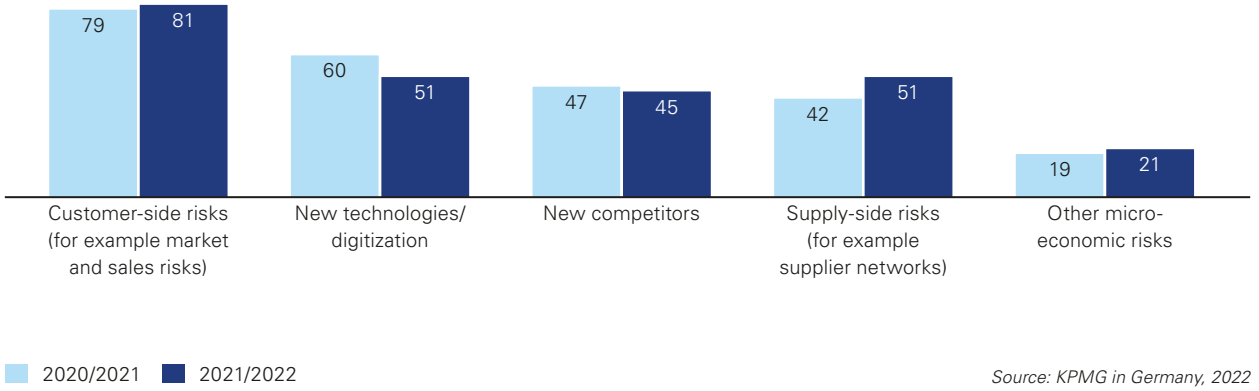
On a microeconomic scale, we observed a relatively stable development for customer-side risks, risks from new competitors and other microeconomic risks in comparison to last year's results. New technologies and digitization appear to noticeably decrease in importance to the study participants, while supply-side risks are attributed significantly greater importance.

Figure 22:
Consideration of risks in the financial forecast – macroeconomic risks
Total (in percent, multiple choices possible)



Source: KPMG in Germany, 2022

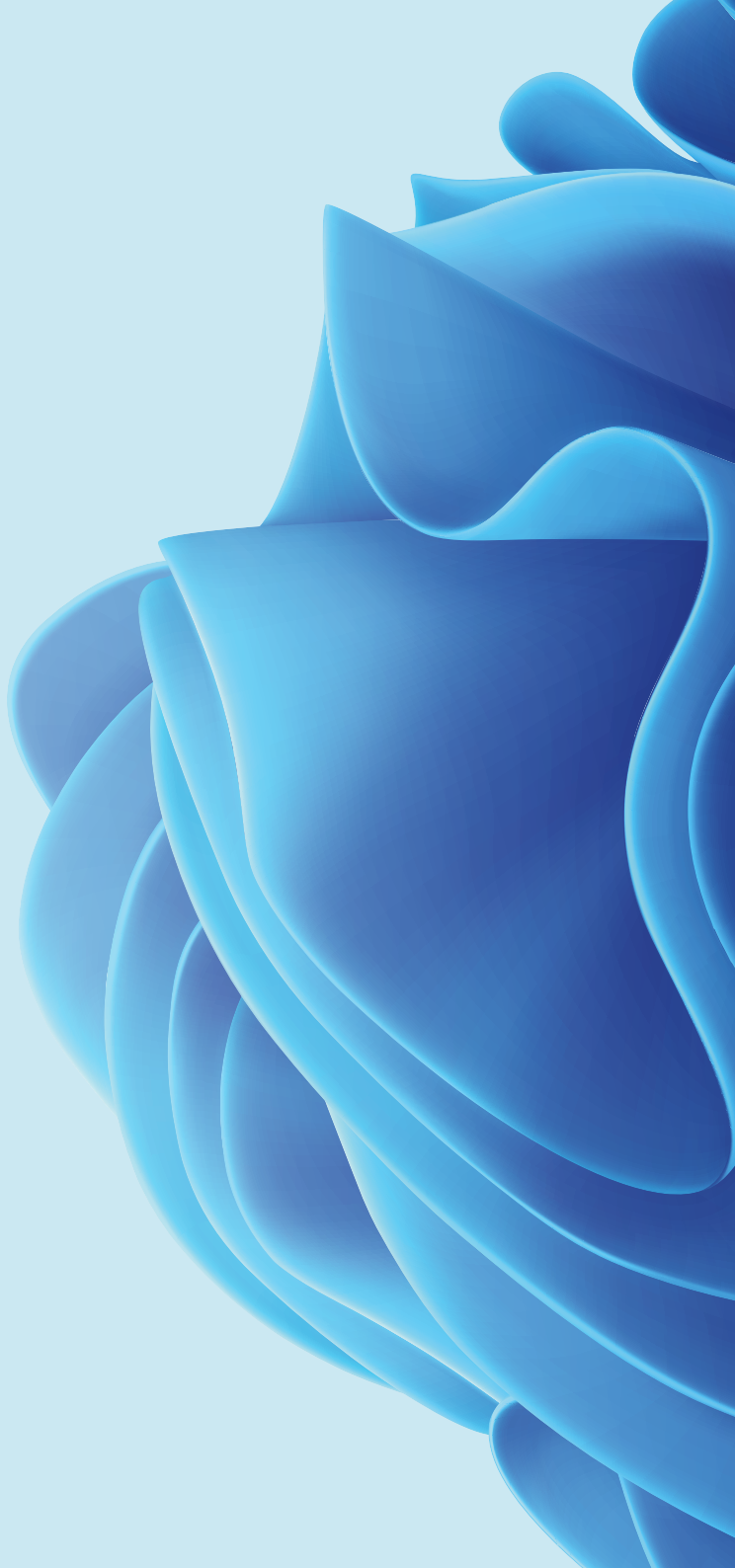
Figure 23:
Consideration of risks in the financial forecast – microeconomic risks
Total (in percent, multiple choices possible)



Source: KPMG in Germany, 2022

3

Determination of the Cost of Capital Parameters



3.1 WACC Overview

For the derivation of the enterprise value of a company, the most commonly used discounted cash flow (DCF) method is the so-called WACC approach.

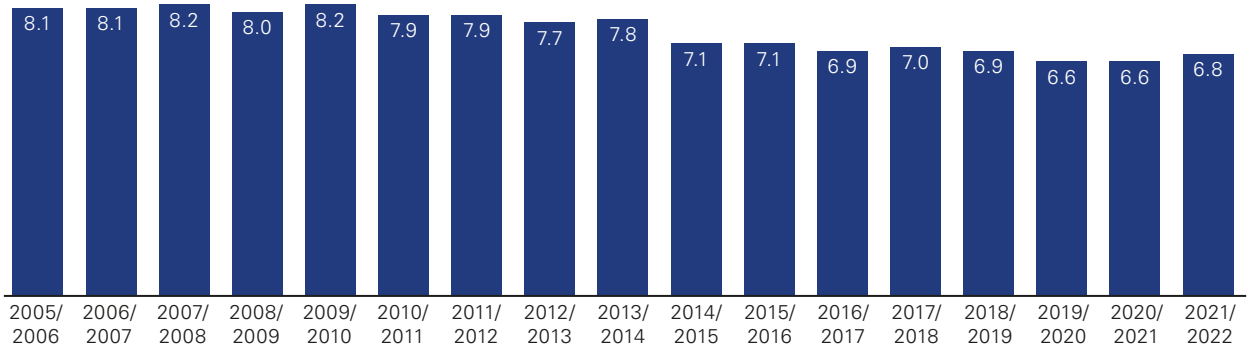
Using this approach, the weighted average cost of capital (WACC) is utilized to discount a company's future cash flows. In order to determine the WACC, cost of equity and cost of debt are weighted by the corresponding shares of the market value of equity and market value of debt with respect to the total capital (entity value).

Compared to the last two years, in which the average WACC across all participating companies remained constant at 6.6 percent, an increase to 6.8 percent can be observed this year.

While the derivation of the cost of capital requires consistently applied concepts that also apply to different types of projects, a high percentage of study participants does not compare the cost of capital used in M&A transactions and investment decisions.

The crucial factor when deriving the cost of capital is not consistency on a value basis, but rather to ensure its methodological consistency throughout the various occasions for valuation that arise in practice.

Figure 24:
WACC (after corporate taxes)
Total (in percent)



Source: KPMG in Germany, 2022

Relevant cost of capital parameters at a glance

In times of uncertainty, it is more important than ever for companies to keep an eye on cost of capital parameters in order to be prepared for changing market conditions and to protect your company against losses. How can companies keep track of the most important capital market data? The KPMG Valuation Data Source collates relevant cost of capital parameters and guides the user through the derivation of the individual WACC or the cost of equity relevant for the financial sector: the user simply specifies the preferred reporting date, the desired country, the currency and the peer group and selects the desired settings for the calculations. The KPMG Valuation Data Source provides access to cost of capital parameters from more than 150 countries and peer group-specific data from over 13,500 companies worldwide. Historical cut-off dates are available from 2012 until today.

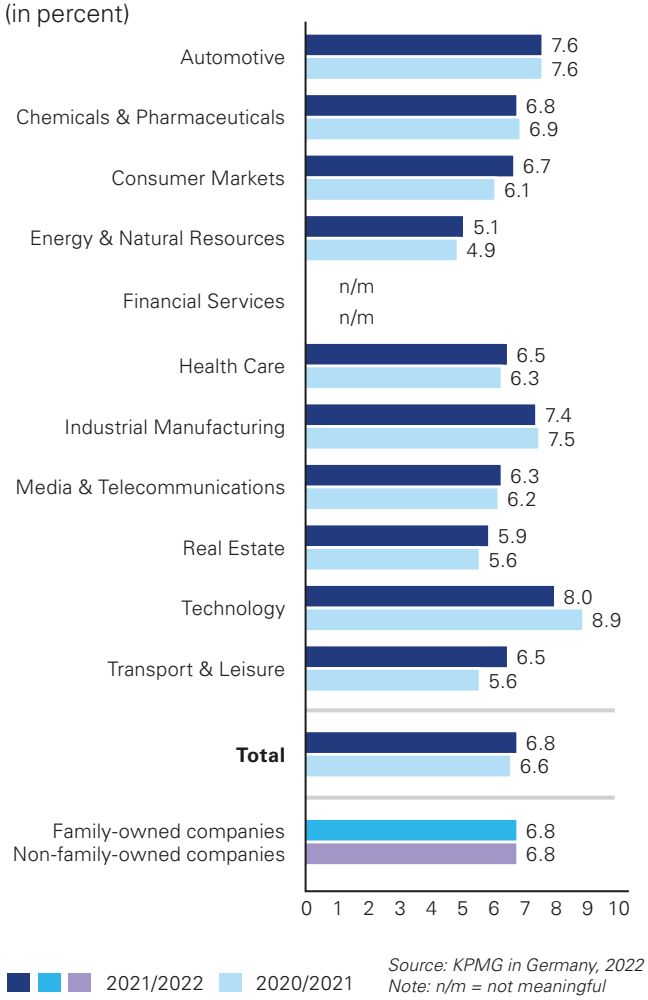
For further information see **www.kpmg.de/valuation-data-source**.

This year's increase in the aggregate WACC is also reflected in most of the industries considered. The recent development is especially driven by an increasing WACC in the Transport & Leisure (5.6 percent to 6.5 percent), Consumer Markets (6.1 percent to 6.7 percent) as well as Real Estate (5.6 percent to 5.9 percent) sectors.

While most industries report an increase in the WACC, a few sectors also signal a decline. The highest decrease compared to the previous year can be observed in the Technology sector (8.9 percent to 8.0 percent).

The average WACC applied does not differ between family-owned companies and non-family-owned companies.

Figure 25:
WACC (after corporate taxes) by industry
(in percent)



Source: KPMG in Germany, 2022
Note: n/m = not meaningful

Consumer Markets

The Consumer Markets sector comprises the Consumer Markets and Retail sub-sectors. In general, the development of the cost of capital in these sub-sectors was quite homogeneous. While the WACC for the Consumer Markets sub-sector increased from 5.7 percent to 6.4 percent, the WACC in the Retail sub-sector increased from 6.0 to 7.0 percent. As a result of these developments and the stronger increase in the Retail sector, the gap between the two sub-sectors widened slightly to 0.6 percentage points.

Media & Telecommunications

In the Media sub-sector, the WACC decreased slightly from 6.7 percent in the previous year to 6.6 percent in the current year. In contrast, an increase can be observed in the Telecommunications sub-sector. Compared to last year, the WACC increased from 5.5 percent to 5.8 percent.

3.2 Risk-free Rate

The determination of the cost of equity is commonly based on model considerations that rely in particular on theoretical capital market models such as the Capital Asset Pricing Model (CAPM).

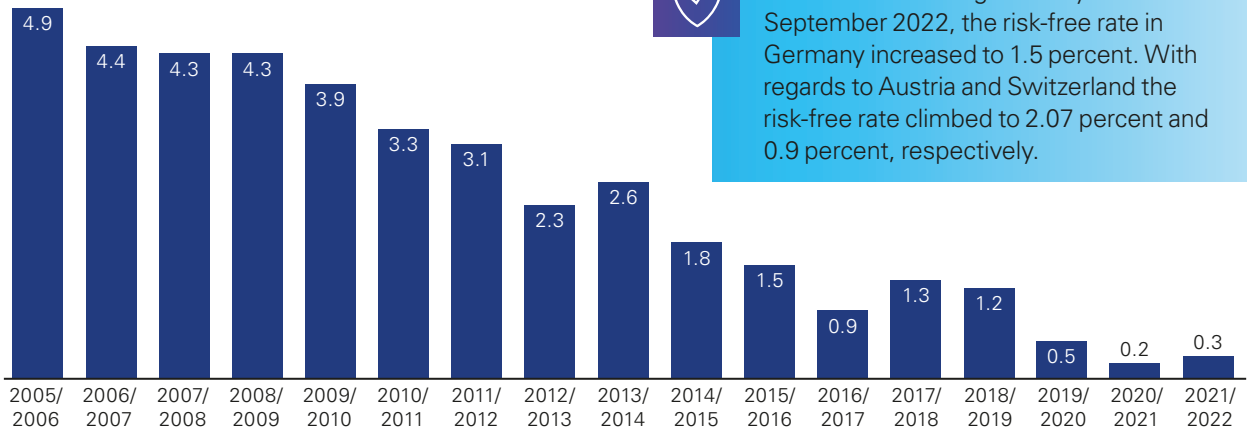
According to the CAPM, the cost of equity can be divided into the risk-free rate and a risk premium, that compensates investors for the risks taken with regard to the asset invested in.

In order to ensure maturity equivalence, the current term structure of interest rates of the relevant central bank should be used to determine the risk-free rate.

To smooth short-term market fluctuations and possible estimation errors particularly for long-term returns, the risk-free rate should be calculated using the average of the three months preceding the valuation date. After the downward trend that could be observed in recent years, the applied risk-free rate increased by 0.1 percentage points to 0.3 percent this year.

A cross-country comparison shows a heterogeneous development. In Germany and Austria the applied risk-free rate increased from 0.1 percent in 2020/2021 to 0.2 percent in 2021/2022. In contrast, in Switzerland the applied risk-free rate continued to further decline by 0.2 percentage points to 0.7 percent.

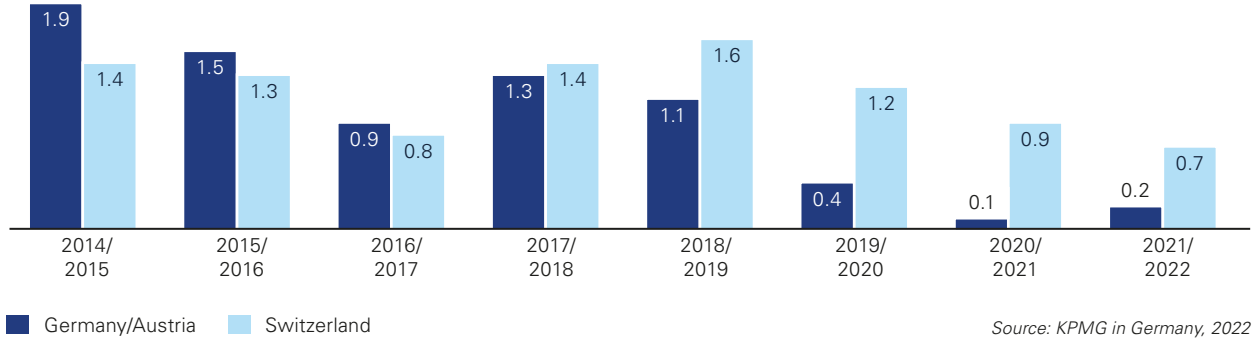
Figure 26:
Average risk-free rate applied
Total (in percent)



In recent months, the risk-free rate has further increased significantly. As of September 2022, the risk-free rate in Germany increased to 1.5 percent. With regards to Austria and Switzerland the risk-free rate climbed to 2.07 percent and 0.9 percent, respectively.

Source: KPMG in Germany, 2022

Figure 27:
Average risk-free rate applied
Germany/Austria versus Switzerland (in percent)



Source: KPMG in Germany, 2022

3.3 Market Risk Premium

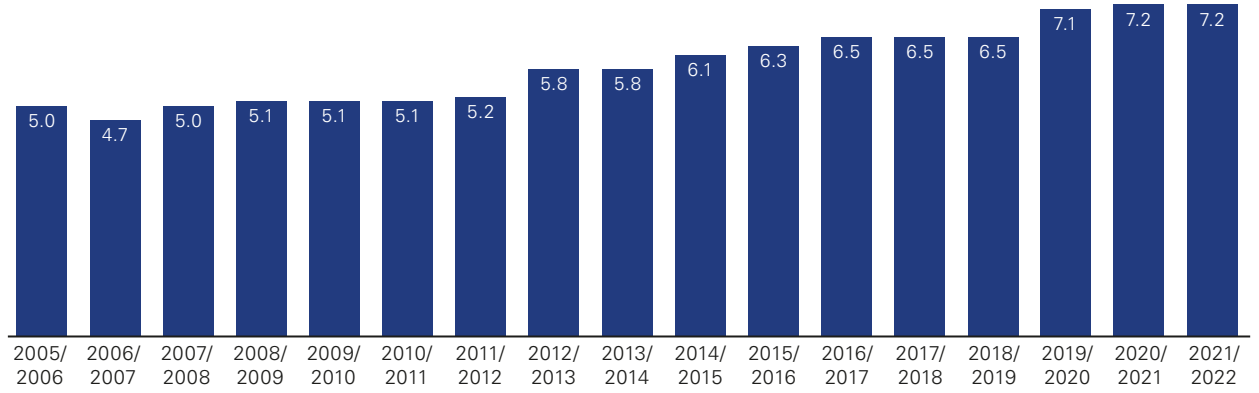
The market risk premium is a parameter that is not directly observable in capital markets. It is derived by subtracting the risk-free rate from the market return.

In October 2019, the Technical Committee for Business Valuation and Economics (FAUB, Fachausschuss für Unternehmensbewertung) of the Institute of Public Auditors in Germany (IDW, Institut der Wirtschaftsprüfer) published an adjustment of the recommended bandwidth of an appropriate market risk premium due to the current developments in the capital markets and monetary policy of the European Central Bank. Consequently, the new recommended bandwidth for the market risk premium in Germany ranges between 6.0 and 8.0 percent.

The Council of Experts for Business Administration (KFS/BW, Fachsenat für Betriebswirtschaft) of the Chamber for Tax Advisors and Auditors in Austria (KSW, Kammer der Steuerberater und Wirtschaftsprüfer) recommended a nominal market return of 7.5 to 9.0 percent at the end of 2017. Less the current risk-free rate, this results in an approximate market risk premium of between 7.3 and 8.8 percent.

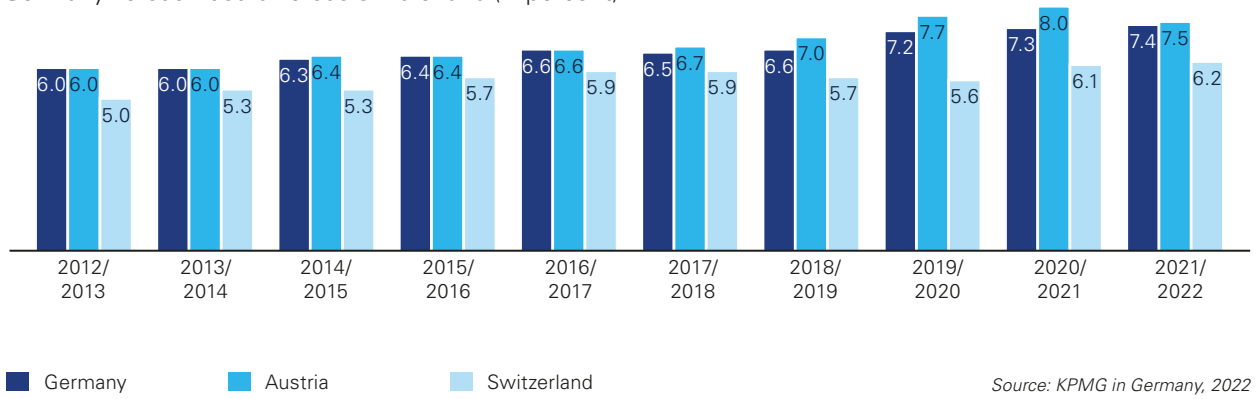
Individual analyses to determine the market risk premium should always be performed based on the aforementioned ranges recommended by the standard-setters.

Figure 28:
Average market risk premium
Total (in percent)



Source: KPMG in Germany, 2022

Figure 29:
Average market risk premium
Germany versus Austria versus Switzerland (in percent)



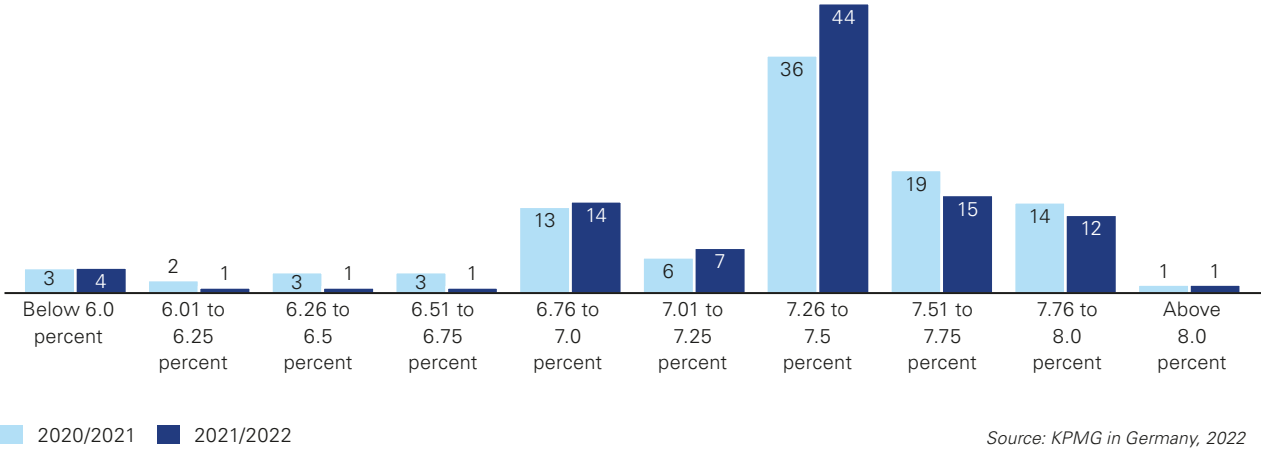
Source: KPMG in Germany, 2022

In line with the results of last year's study, the majority (79 percent) of participating companies applies a market risk premium above 7.0 percent. More than half of the participating companies (59 percent), apply a market risk premium in a range between 7.26 percent and 7.75 percent.

By definition, the market risk premium is an industry-independent parameter. Accordingly, the market risk premiums applied by the study participants were in a narrow range without any significant differences between specific industries.

Figure 30:
Distribution of the market risk premiums of German companies
(in percent, multiple choices possible)

In recent months, the risk-free rate has increased significantly. According to KPMG-analysis, higher uncertainty and the strong increase in inflation have led to an increase in total return expectations, so that no decline in the market risk premium has been observed so far.



Source: KPMG in Germany, 2022

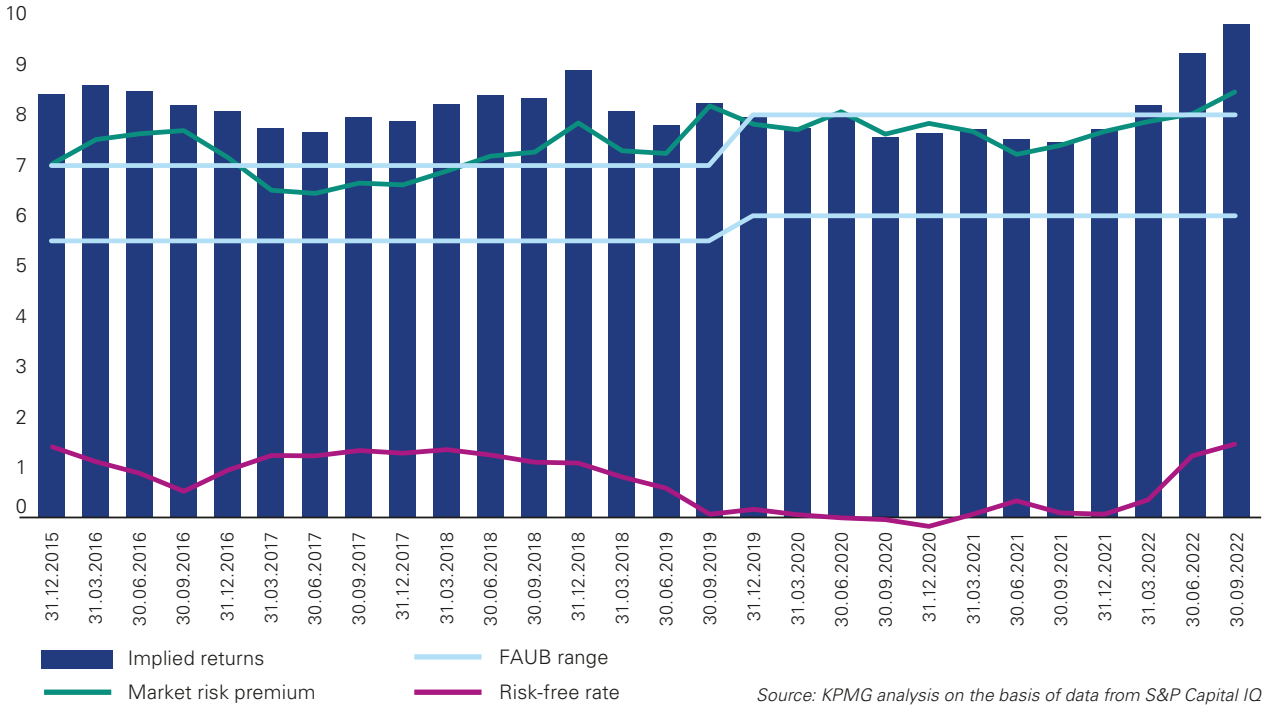
Historical return analyses are primarily used as a basis for the determination of market returns and, consequently, market risk premiums. If the risk premium is determined by deducting the average risk-free rate from the average historical market return, it is implicitly assumed that the risk premium remains constant over time. However, if the risk premium is calculated as the difference between the market return and the risk-free rate for different points in time in the past, the risk-free rate will fluctuate over time.

Overall, realized returns and risk premiums in the past provide a basis for the estimation of an economically meaningful range of expected future returns and risk premiums under the assumption that the observed economic conditions in the past are on average applicable to the future considering long-term trends and inflation effects.

For some time, researchers have placed increased emphasis on models that derive implicit returns, and these models have also gained importance in valuation practice. Implied returns and risk premiums allow for a forward-looking and specific derivation of the market risk premium considering current changes in expected returns and interdependencies between the components of returns (risk-free rate and risk premiums) over time, based on return expectations of capital market investors.

Due to the increased uncertainties, current market risk premiums are at the upper end of the range of 6.0 percent to 8.0 percent recommended by the FAUB.

Figure 31:
Change in expected returns in Germany
(in percent)



Source: KPMG analysis on the basis of data from S&P Capital IQ

In combination with an increased risk-free rate, the total return expectations currently amount to around 9.5 percent. Due to the inflation expectations, which are above the usual corridor of historical values, this is slightly above a range for the total return of 7.0 percent to 9.0 percent stated by the FAUB in 2019 under the former inflation regime.

3.4 Beta Factor

The beta factor measures the volatility of an individual asset in comparison to the return of the overall market. Therefore, it is a quantitative measure of a company's operational risk.

Lacking alternatives, the beta factor is derived from historical observations despite its purpose of determining the company's future risk in relation to the general market risk.

Beta factors can only be observed for listed companies, which is the reason beta factors are typically derived based on the analysis of listed comparable companies (peer group). Since new business models sometimes do not have a peer group consisting of a number of listed companies, there might be a need for new concepts in the future.

While the unlevered beta factor reflects the operational risk independent of a company's capital structure, the levered beta factor serves as a metric for the equity provider's systemic risk under consideration of the risk from debt in the capital structure.

Overall, the average unlevered beta factor applied by participating companies slightly increased from 0.84 to 0.86. However, relatively strong changes can be observed in individual industries such as the Automotive, the Chemicals & Pharmaceuticals as well as the Transport & Leisure industry.

Figure 32:
Average unlevered beta factors by industry

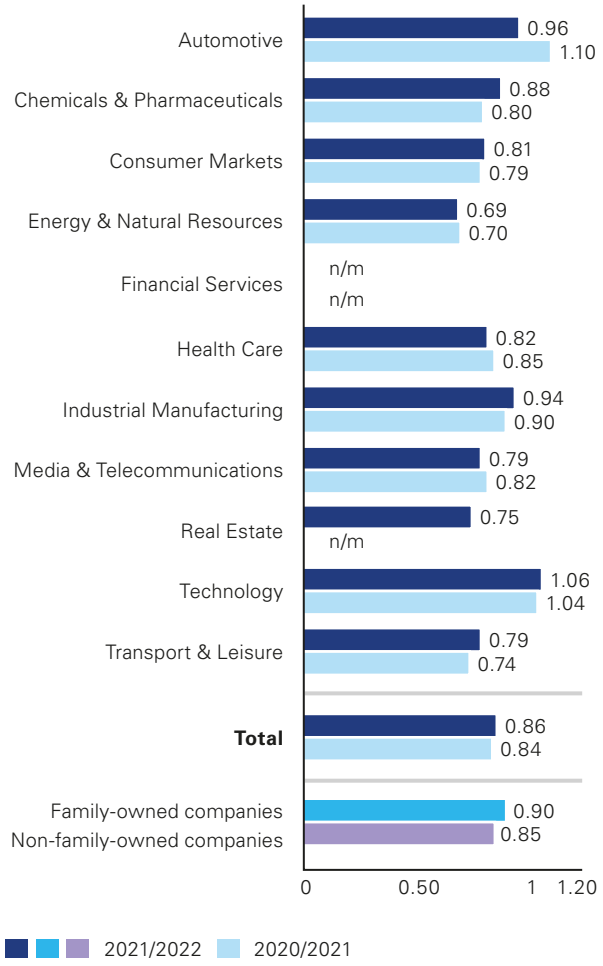
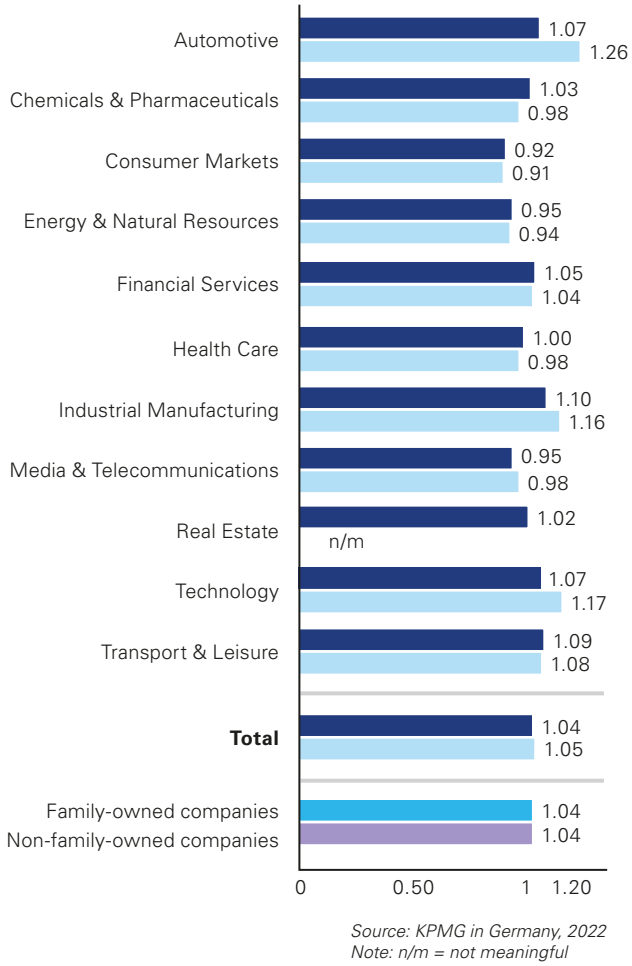


Figure 33:
Average levered beta factors by industry



Source: KPMG in Germany, 2022
Note: n/m = not meaningful

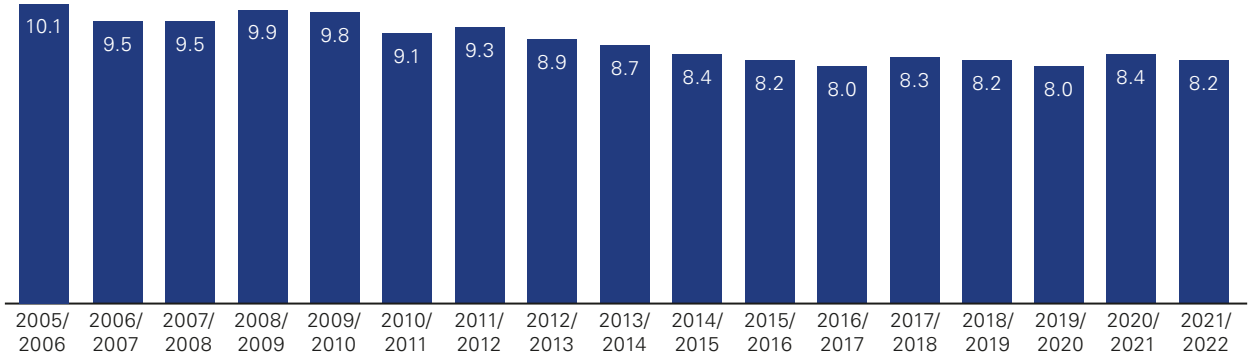
3.5 Cost of Equity

The levered cost of equity is determined based on the underlying mathematical equation of the CAPM using the risk-free rate, the company-specific levered beta factor and market risk premium.

In comparison to last year's study, the average levered cost of equity applied by participating companies decreased from 8.4 percent to 8.2 percent.

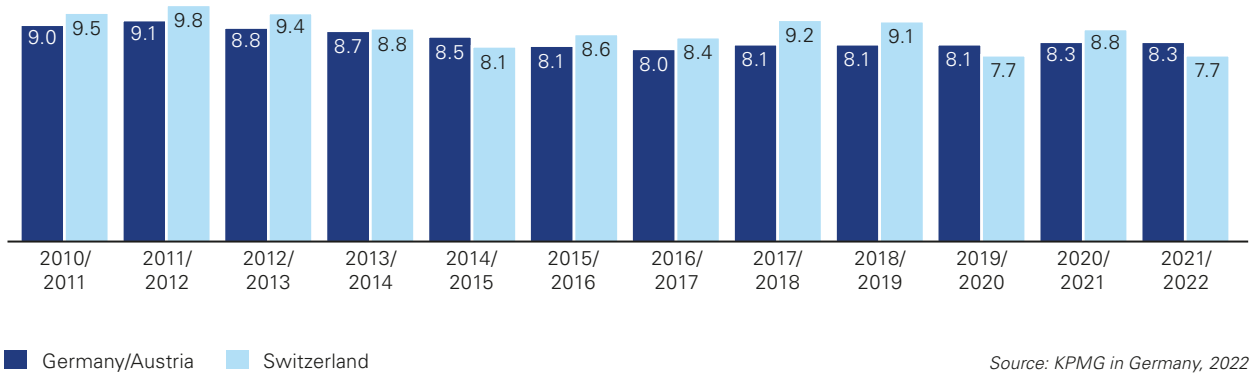
While the average levered cost of equity in Germany and Austria remains at a constant level of 8.3 percent in the survey period, a significant decline from 8.8 percent to 7.7 percent can be observed in Switzerland.

Figure 34:
Average levered cost of equity
Total (in percent)



Source: KPMG in Germany, 2022

Figure 35:
Average levered cost of equity
Germany/Austria versus Switzerland (in percent)



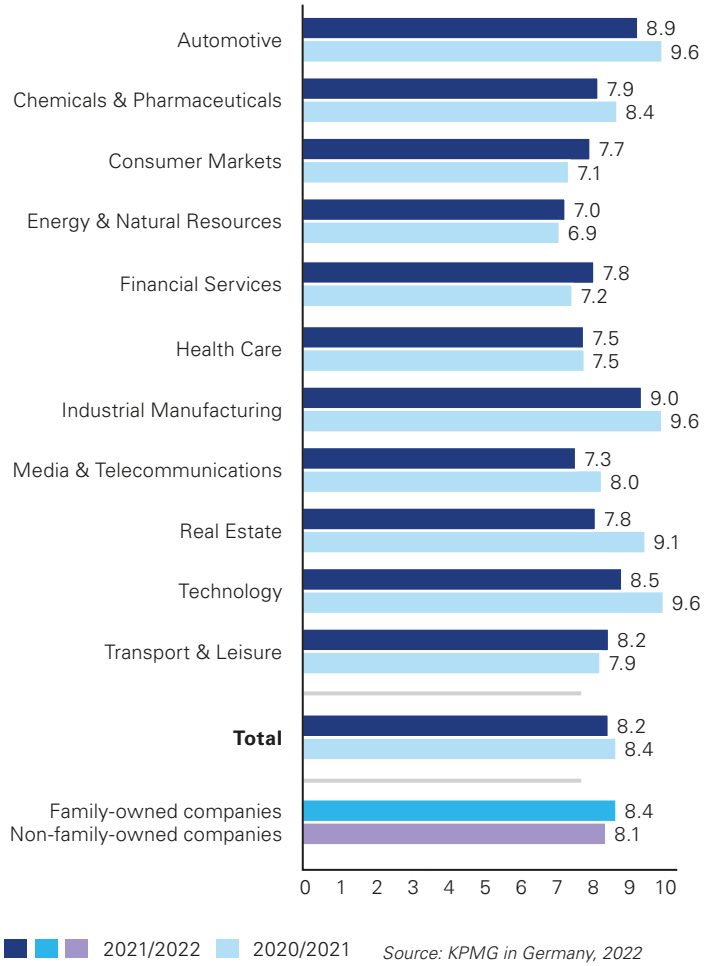
Source: KPMG in Germany, 2022

Compared to the previous year, the levered cost of equity slightly decreased in the survey period. Overall, the small decline in levered beta factors overcompensates the slight increase in the average risk-free rate and the relatively unchanged average market risk premium in the survey period.

Within sectors, the applied levered cost of equity changed significantly. Especially the sectors Automotive, Media & Telecommunications, Real Estate and Technology experienced a drop in the levered cost of equity. The largest increases could be observed in the Financial Services and the Consumer Markets sector.

The levered cost of equity applied by the participating family-owned companies is 0.3 percentage points higher than the levered cost of equity applied by non-family owned companies.

Figure 36:
Average levered cost of equity by industry
(in percent)



Source: KPMG in Germany, 2022

Chemicals & Pharmaceuticals

Compared to the previous year, the levered cost of equity in the Chemicals & Pharmaceuticals sector decreased by 0.5 percentage points to 7.9 percent. This development is also reflected in the individual sub-sectors. In the Chemicals sub-sector, the levered cost of equity declined by 0.4 percentage points to 8.3 percent and in the Pharmaceuticals sub-sector by 0.3 percentage points to 7.4 percent.

Financial Services

In the Financial Services sector the levered cost of equity increased by 0.6 percentage points to 7.8 percent. This increase is mainly attributable to the Banking sub-sector in which the levered cost of equity increased from 8.6 percent in the previous year to 8.8 percent this year. In contrast, the levered cost of equity in the Insurance sub-sector declined by 0.8 percentage points to 4.6 percent.

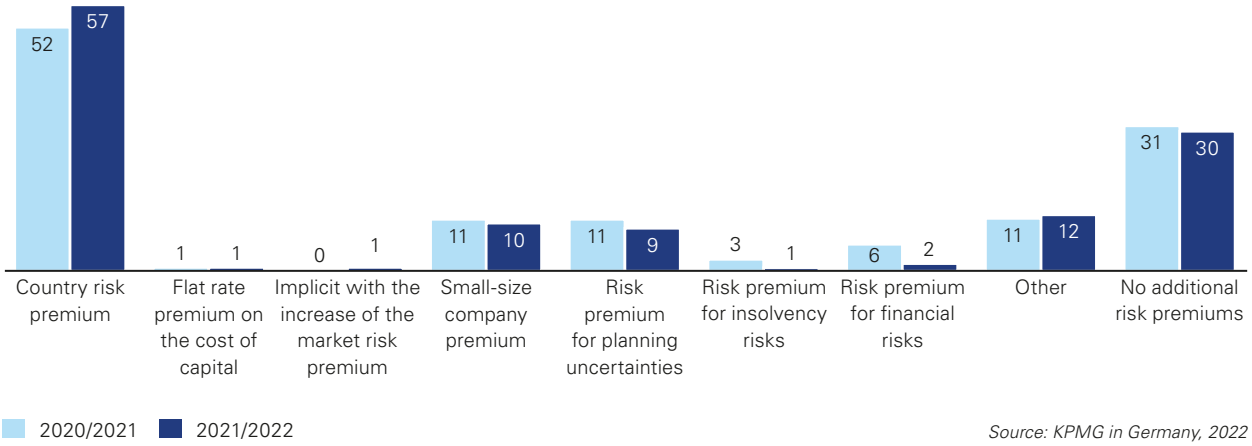
3.6 Other Risk Premiums

Since it is impossible to forecast future developments and specifically future cash flows precisely, there is an even greater need to identify the uncertainty and associated risk of cash flows and to reflect these properly in the expected value as well as in the cost of capital.

Consequently, specific risk premiums as part of the cost of capital might be used to mitigate the uncertainty alongside the option of risk-adjusting discounts from the cash flow.

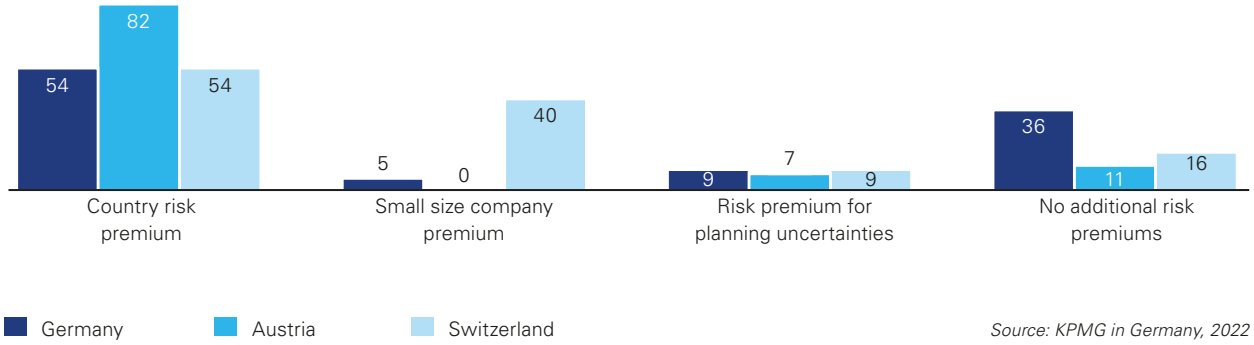
In line with the previous year's findings, the country risk premium is still the most important surcharge on the cost of capital and thus the most frequently applied other risk premium at both the overall and national level.

Figure 37:
Other risk premiums 2020/2021 versus 2021/2022
Total (in percent, multiple choices possible)



Source: KPMG in Germany, 2022

Figure 38:
Selected other risk premiums 2021/2022
Germany versus Austria versus Switzerland (in percent, multiple choices possible)



Source: KPMG in Germany, 2022

3.7 Cost of Debt and Debt Ratio

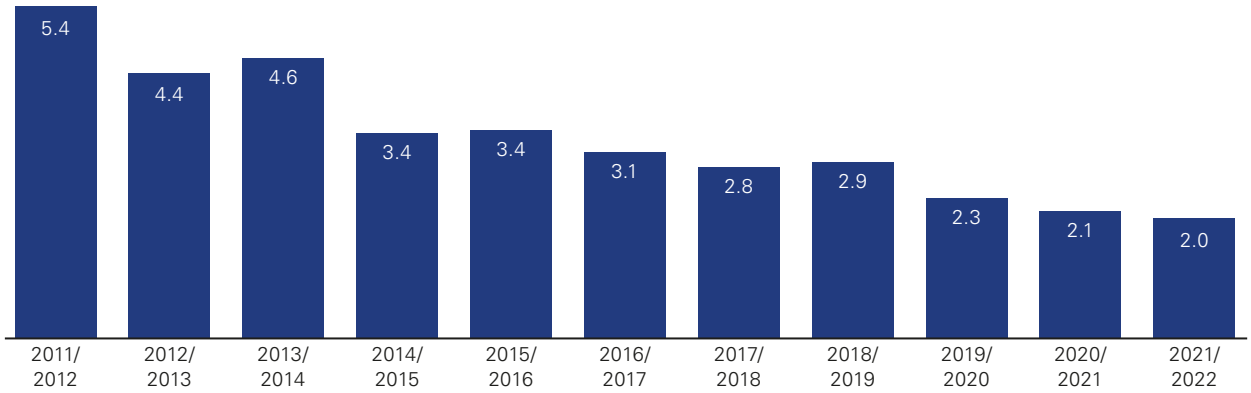
Another key component within the WACC derivation is the cost of debt and the debt ratio.

While the former is an expression of the expected rate of return from a debt lender, the latter can be defined as the ratio of market value of the (net) debt to market value of the total capital (entity value).

The average cost of debt applied by participating companies further declined to a new historic low of 2.0 percent in the survey period. Thus, the observable downward trend in recent years continues.

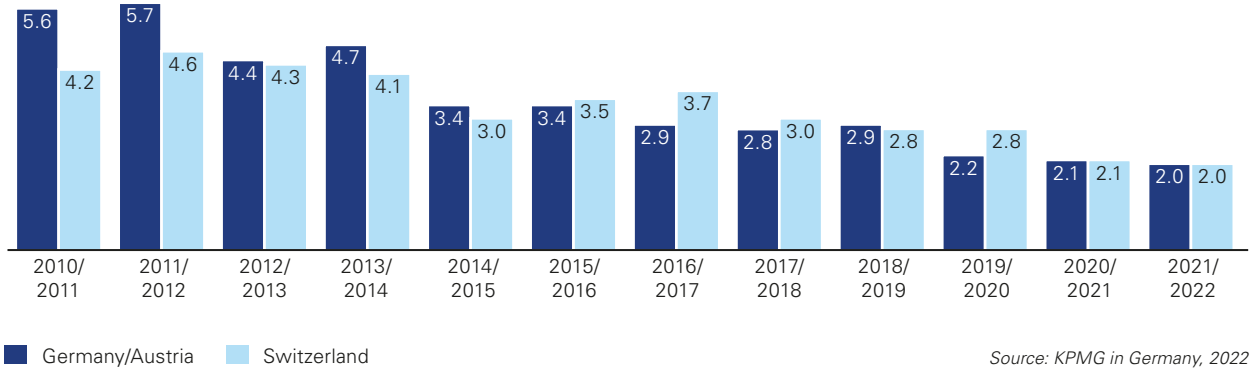
In line with the previous year, no difference in the cost of debt between Germany/Austria and Switzerland can be observed, although the risk-free rates within these regions differ.

Figure 39:
Average cost of debt
Total (in percent)



Source: KPMG in Germany, 2022

Figure 40:
Average cost of debt
Germany/Austria versus Switzerland (in percent)



Source: KPMG in Germany, 2022

Compared to last year's study, the development of the cost of debt across industries is quite heterogeneous. Significant decreases in the cost of debt are reported by participating companies within the Chemicals & Pharmaceuticals, the Industrial Manufacturing as well as the Media & Telecommunications sectors. The largest increase in the survey period in the cost of debt could be observed in the Transport & Leisure sector.

In line with last year's study, the trend towards lower cost of debt is accompanied by a further decrease in the total average debt ratio, with the largest decline from 49.0 percent to 26.1 percent in the Real Estate sector.

Figure 41:
Average cost of debt by industry
(in percent)

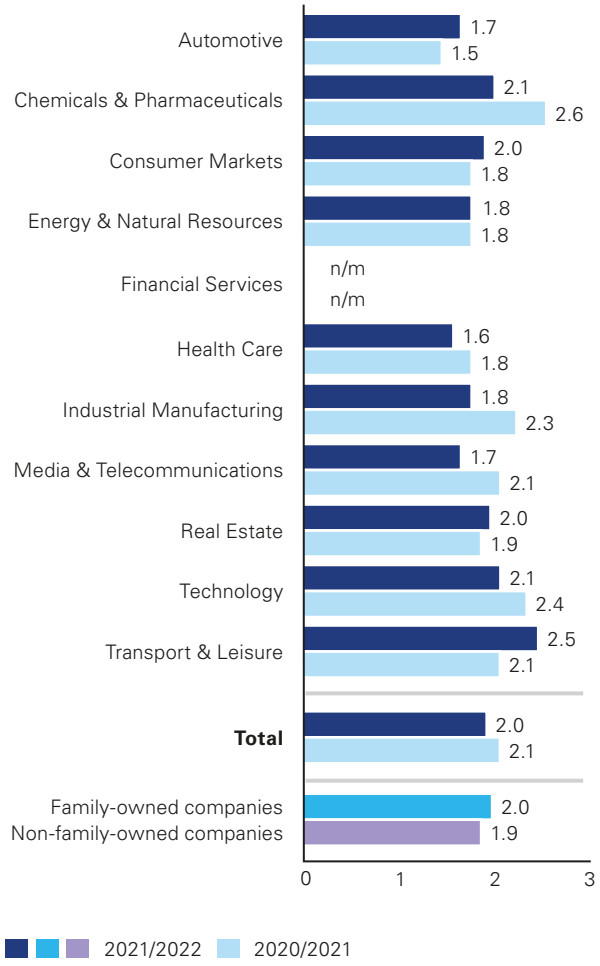
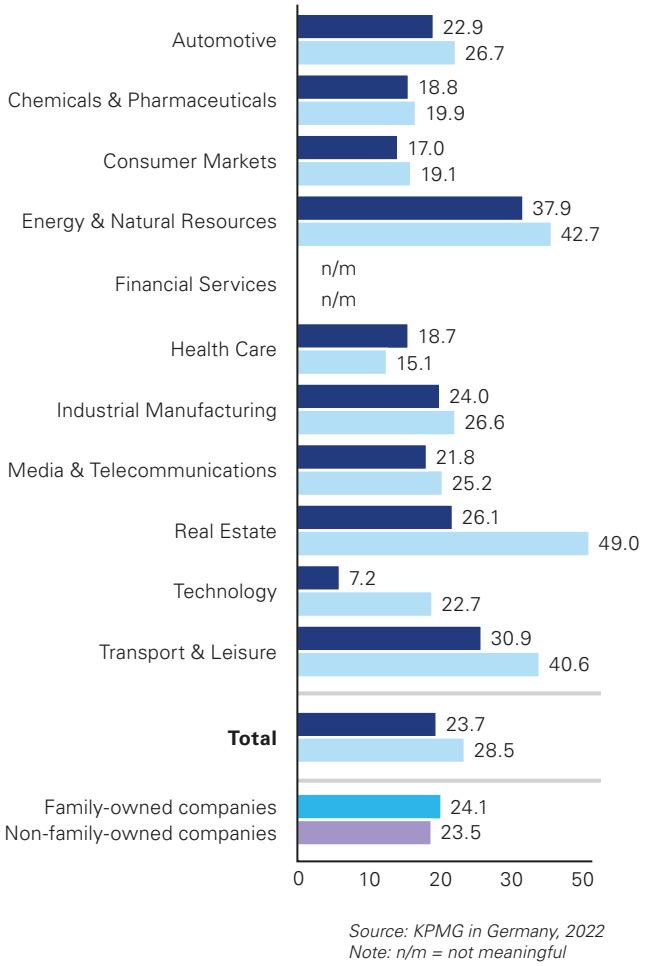


Figure 42:
Average debt ratio by industry
(in percent)



Source: KPMG in Germany, 2022
Note: n/m = not meaningful

3.8 Sustainable Growth Rate

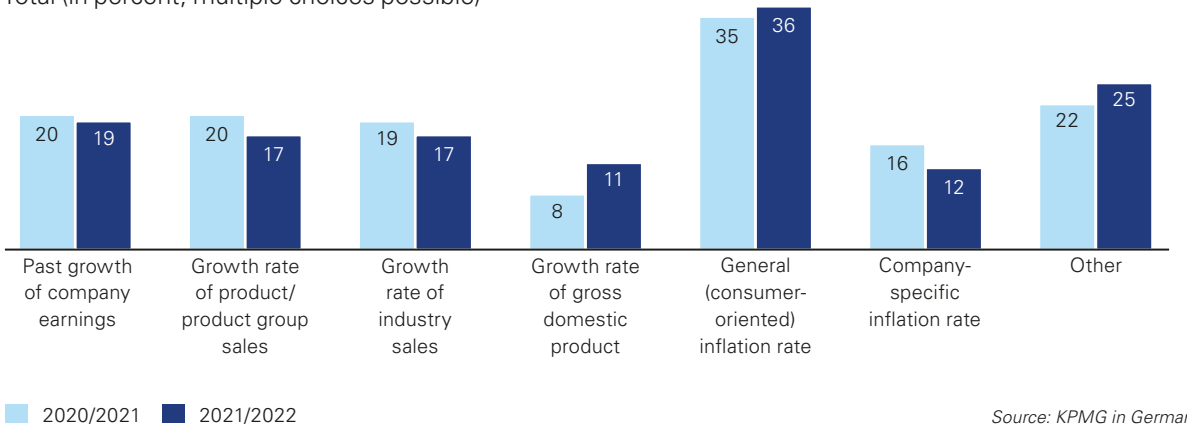
The sustainable growth rate of a company is an essential component in order to determine the terminal value. It reflects the company-specific inflationary growth in a sustainable state.

While the company-specific sustainable growth rate should be derived by analyzing the company-specific operating activities, the most common way among study participants to estimate the sustainable growth rate remains the application of a consumer-based inflation rate.

Based on the assumption of perpetuity, the terminal value is usually the primary contributing factor towards the value of an enterprise.

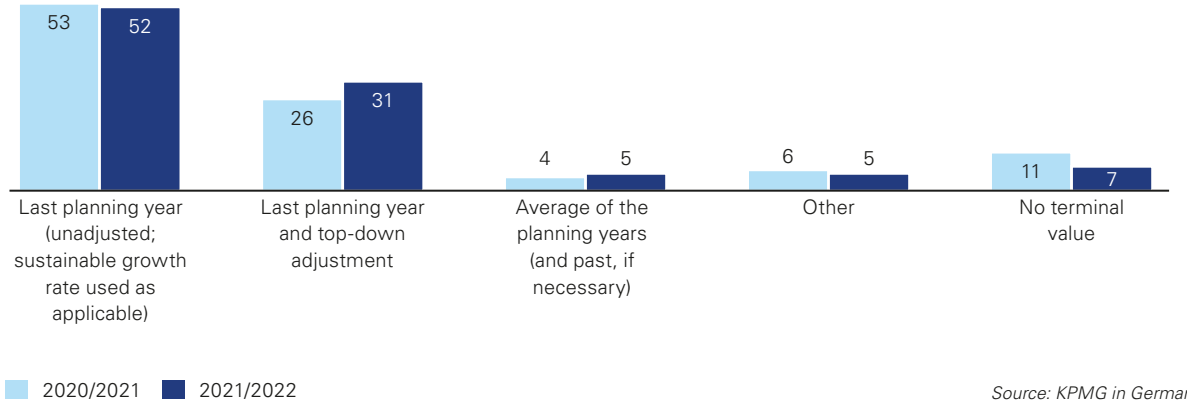
The terminal value presumes that the company is in a sustainable state of equilibrium. Such a state is typically not achieved at the end of the planning horizon. Due to its great importance, the determination of the sustainable year should be based on a scenario approach such as Monte-Carlo simulations.

Figure 43:
Measurement of the sustainable growth rate
Total (in percent, multiple choices possible)



Source: KPMG in Germany, 2022

Figure 44:
Determination of the terminal value
Total (in percent)



Source: KPMG in Germany, 2022

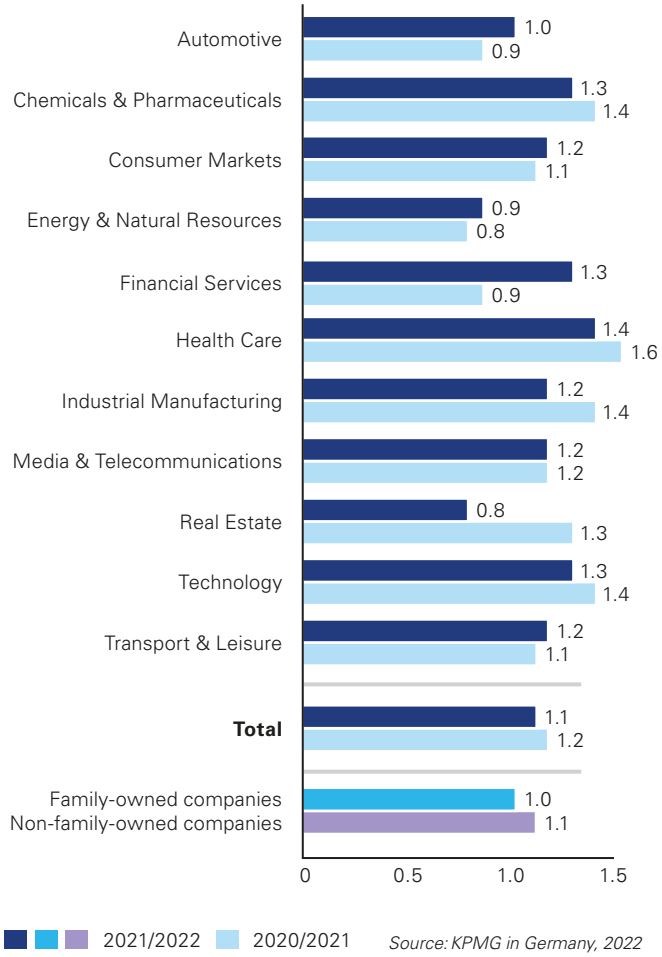
Compared to last year, the total average sustainable growth rate applied by the participating companies slightly decreased from 1.2 percent to 1.1 percent.

Overall, the change in average sustainable growth is relatively heterogeneous across industries. The largest decline could be observed in the Real Estate sector, in which the sustainable growth rate decreased from 1.3 percent to 0.8 percent. In contrast, the largest increase in the sustainable growth rate from 0.9 percent to 1.3 percent is reported by study participants within the Financial Services sector.

At the country level, the average sustainable growth rate in Germany remained constant compared to last year. In Austria, an increase from 1.1 percent to 1.3 percent can be observed and in Switzerland the average sustainable growth rate decreased from 1.7 percent to 1.4 percent.

When interpreting the applied growth rate, it is also necessary to consider the length of the specific detailed planning horizon and the growth rates applied there.

Figure 45:
Average sustainable growth rate by industry
(in percent)



Source: KPMG in Germany, 2022

Chemicals & Pharmaceuticals

In contrast to last year's study we observe differing growth rates within the Chemicals & Pharmaceuticals Sector. While participating companies in the Chemicals sub-sector applied a growth rate of 1.3 percent, companies in the Pharmaceuticals sub-sector applied a slightly lower growth rate of 1.1 percent.

Consumer Markets

Although the growth rate in the Consumer Markets sector decreased slightly compared to last year, a diverging development can be observed within the sub-sectors. While the growth rate in the Consumer Markets sub-sector decreased from 1.4 percent to 1.1 percent, it increased from 0.9 percent to 1.3 percent within the Retail sub-sector.

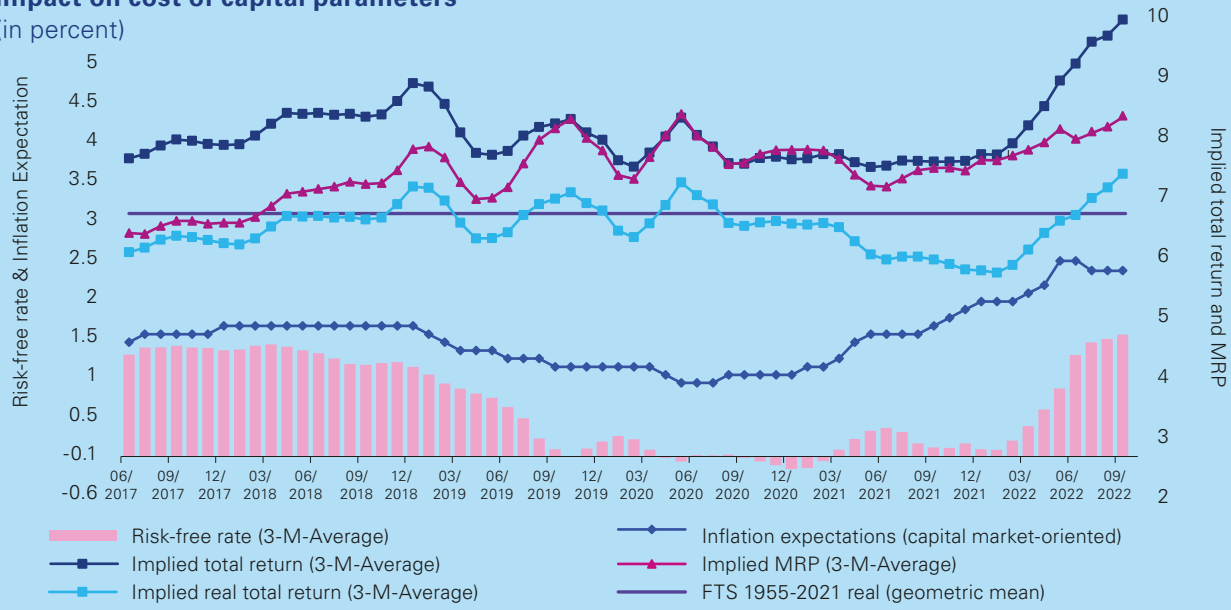
Inflation is back – and what about the cost of capital?

Stability in mechanisms?

In the article "Value enhancement through inflation?" on p. 10f., we discussed the possible fundamental effects of inflation on investors' return expectations. Now we would like to take a look at the current situation on the markets. In this context, the developments of cost of capital parameters over the past months show interesting trends. In the following paragraphs, we will show that the impact of inflation on investors' return expectations or return requirements may be delayed or erratic. Despite the rise in inflation expectations over the past 18 months, markets have only recently begun to show significant reactions in return expectations. One reason for this may be the ECB's communicated change of direction in its assessment of the causes and time horizon of this high inflation phase.

In determining the expected returns required for valuations, a parallel approach has proven successful in recent valuation practice: Observable historical data is used for the determination of reliable bandwidths and to identify market overreactions in retrospect. Current return expectations are determined on the basis of current capital market data and implied approaches. The risk of transferring inappropriate capital market data from possible current overreactions can be reduced by using historical bandwidths for orientation.

Figure 46:
Impact on cost of capital parameters
(in percent)



Source: KPMG analysis on the basis of data from S&P Capital IQ

Development of implied expected returns

The chart above shows that between mid-2020 and the end of 2021, a relatively constant implied nominal total return of around 7.7 percent was estimated. Inflation expectations remained around or even below the ECB's communicated inflation target of around 2 percent.

The nominal risk-free rate fixed by the ECB interventions remained around 0 percent, resulting in a period of negative real risk-free rates. It is evident that rising inflation expectations last year did not initially trigger any reaction in nominal total returns, and the ECB also maintained its zero-interest rate policy. As a result, this led to sharply declining real total returns and partly supported by the expansionary monetary policy, increases in prices on the stock and real estate markets.

With the beginning of 2022, a significant increase in implied nominal total returns and, as a result of the ECB's policy change, also in the nominal risk-free rate can be observed. The increase in the implied nominal total return results from declining stock markets, which are not compensated by reduced analyst's earnings expectations. Whereas in the past 20 years, total returns were mainly driven by risk perceptions during crises, now actual inflation, inflation expectations and possible follow-up interventions by central banks are coming more to the fore than before. Thus, long-term capital market-oriented inflation expectations have recently risen sharply and are currently showing a stabilizing trend.

Inflation is back – existing models must be critically questioned against this background and adjusted if necessary. To capture the effects of inflation on the cost of capital, it is advisable to refer to real return bandwidths of the past.

In 2021, increasing inflation expectations initially led to declining real returns at the lower end of a historical bandwidths of German real returns. Since the beginning of 2022, real returns increased significantly due to a higher risk perception against the background of the various crisis situations and changes in central bank policy, returning to their long-term average. Therefore, there is no reason to limit nominal return expectations due to a risk-driven overreaction of the markets. Nominal return bandwidths resulting from long-term observations are based on "normal" inflation scenarios of the past.

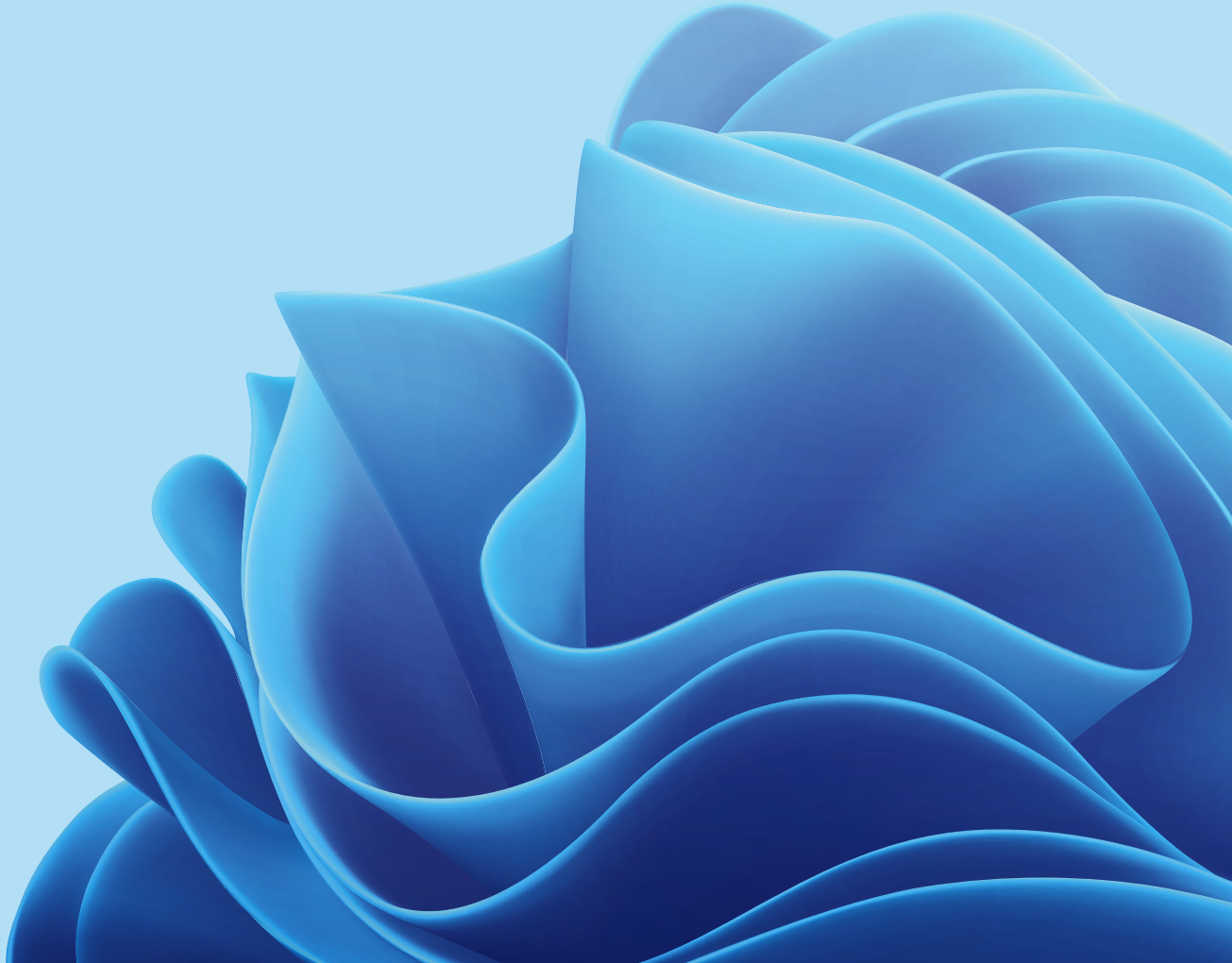
Against the background of the current high inflation phase, we therefore recommend using a nominal return bandwidth adjusted for current inflation based on a bandwidth of historical real returns.

Against this background and corresponding to the increased uncertainties, current market risk premiums are at the upper end of the range of 6.0 percent to 8.0 percent recommended by the FAUB of the IDW since 22 October 2019. In combination with the increased risk-free rate, this currently results in total return expectations of around 9.5 percent. Due to the current inflation expectations, which are above the usual corridor of historical values, this is slightly above a usual range for the total return of 7.0 percent to 9.0 percent stated by the FAUB in 2019 under the former inflation regime.

The development over the entire period under review shows that total returns fluctuate over time due to risk aspects and now also increasingly inflation-related effects, as do the market risk premiums derived from them after the deduction of the relevant risk-free rate. It appears that the risk-free rate and the market risk premium are negatively correlated in many phases, which means that the volatility of the market return is lower than that of the risk-free rate and the market risk premium. In addition, it must be considered that changes in inflation expectations must also be reflected in business plans and sustainable inflation-related growth rates and can thus have a compensating effect on the increase in total returns.

4

Impairment Test



4.1 Recognition of an Impairment

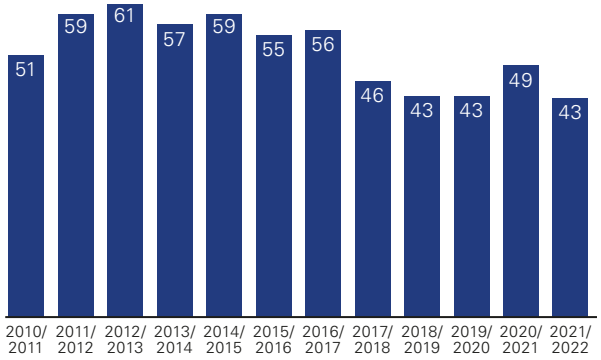
From 2017/2018 to 2019/2020, the number of companies that recognized an impairment of goodwill or assets significantly decreased. In the previous year, an increase in recognized impairments could be observed as a result of the COVID-19 pandemic.

The most recent period exhibits a decline in the number of companies recognizing an impairment to a comparable level observed in the years before the COVID-19 pandemic.

As in the previous years, the majority of the recognized impairments are attributable solely to impairments on assets. In fact, only 17 percent of the participating companies reported that they recognized an impairment on goodwill.

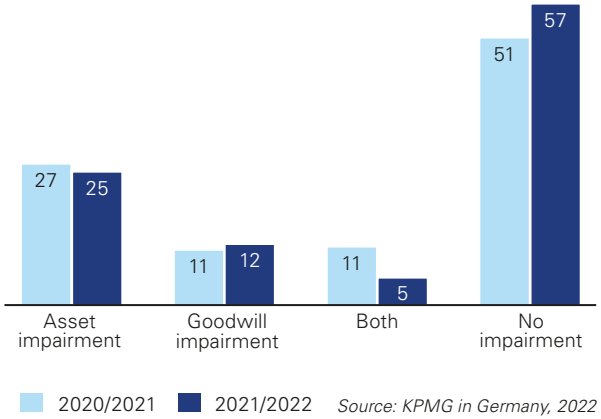
ESG factors (among others) have led to several requirements and regulations that have an impact on investments made. 9 percent of the participating companies are confronted with past investments that have proven to be unprofitable due to ESG requirements/sustainability requirements (summarized here as "stranded assets"). In contrast to last year's study, the majority of participating companies faced with stranded assets does not expect an impairment on these.

Figure 47:
Recognition of an impairment over time
Total (in percent)



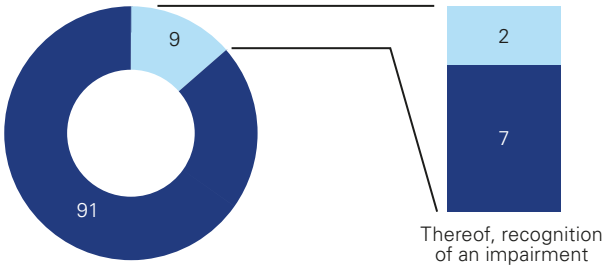
Source: KPMG in Germany, 2022

Figure 48:
Recognition of an impairment
Total (in percent)



Source: KPMG in Germany, 2022

Figure 49:
Stranded assets
Total (in percent)



Source: KPMG in Germany, 2022

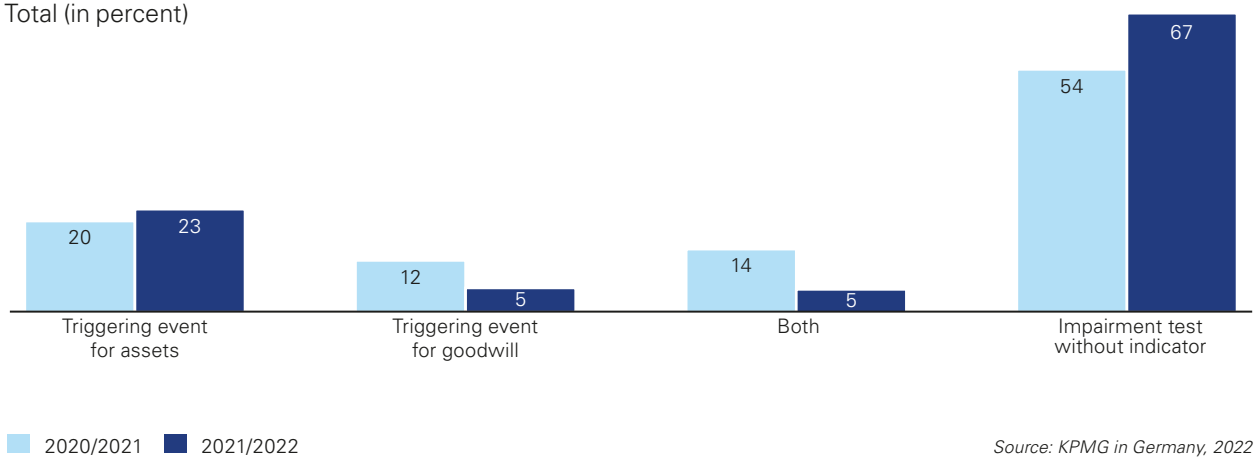
4.2 Triggering Event

The IFRS require an annual impairment test to be carried out on the goodwill recognized in the balance sheet as part of the annual financial statements. In the previous year, almost half of the participating companies performed an extraordinary impairment test due to a so-called triggering event, i.e. an indicator of impairment. This year, only about a third of the participating companies conducted an impairment test based on a triggering event.

In line with previous years, the majority of triggering events were primarily based on poorer long-term expectations. Due to an easing of the COVID-19 pandemic, the share of triggering events from an order decrease significantly declined compared to the previous year.

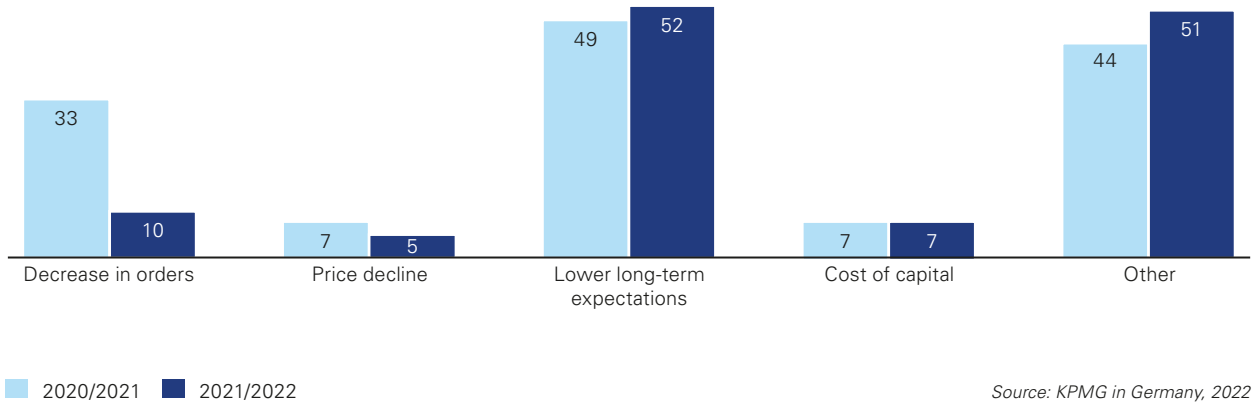
Only seven percent of the participating companies reported the cost of capital as a triggering event for an impairment. As in the previous year, the cost of capital is therefore not a major driver of impairment. However, due to a recent increase in the cost of capital, we expect the share of triggering events attributable to the cost of capital to increase in the near future.

Figure 50:
Triggering event
Total (in percent)



Source: KPMG in Germany, 2022

Figure 51:
Cause of the triggering event
Total (in percent, multiple choices possible)



Source: KPMG in Germany, 2022

4.3 Plausibility – Market Capitalization and Multiples

The concept of fair value less costs of disposal concentrates on the selling price and thus primarily on the estimates of potential acquirers. IFRS specifically demand a plausibility test of the derived valuation for this concept.

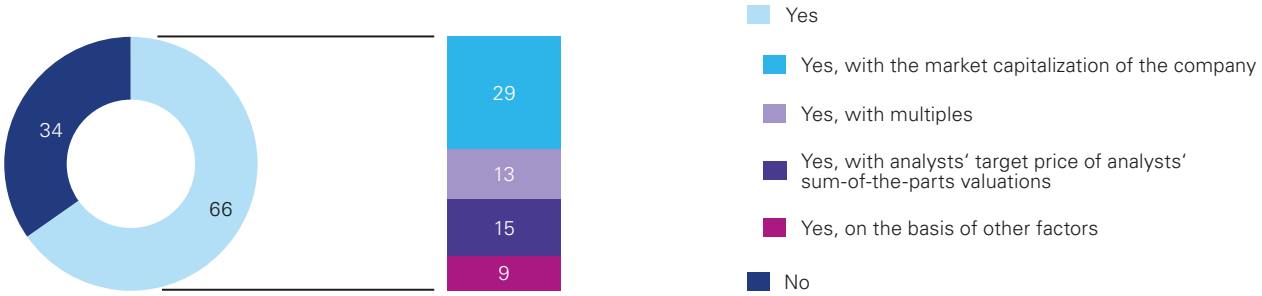
When calculating the value in use, we recommend to perform a plausibility test with market expectations in order to ensure the risk equivalence of the cost of capital.

Since the market capitalization only reflects the control or significant influence over a company to a limited extent – due to the frequently small number of shares traded – it may be recommendable to include a control premium as part of this comparison.

Moreover, when comparing the values determined according to the value in use method with the market capitalization, the valuation perspective and the information available to the capital market could play a role. A plausibility test should therefore take into account additional information such as industry and analyst reports as well as multiples.

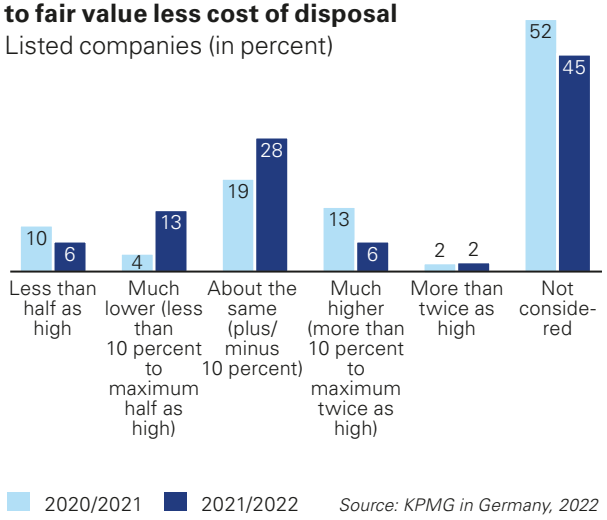
Around two thirds of the participating companies carried out a plausibility test of the valuation results.

Figure 52:
Plausibility of valuation results
Listed companies, total (in percent, multiple choices possible)



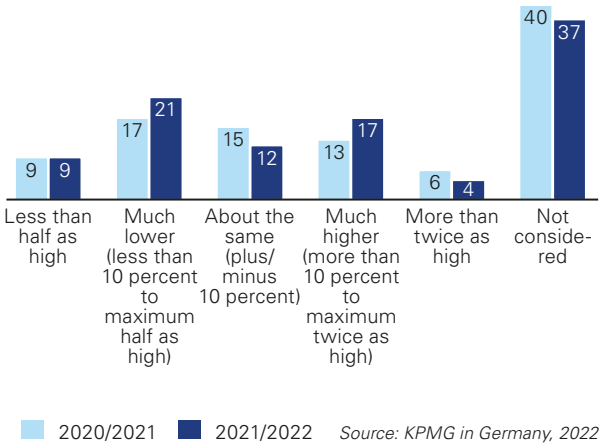
Source: KPMG in Germany, 2022

Figure 53:
Comparison of market capitalization to fair value less cost of disposal
Listed companies (in percent)



Source: KPMG in Germany, 2022

Figure 54:
Comparison of market capitalization to value in use
Listed companies (in percent)



Source: KPMG in Germany, 2022

The IFRS, in particular the fair value less costs of disposal method, require a plausibility check of the derived valuation results, e.g. by applying the multiple approach.

The multiple approach follows the capital market- oriented valuation method. By applying a multiple to a financial figure such as the EBITDA, EBIT, or, in certain cases, sales, the value of a company can be derived in a more simplified manner.

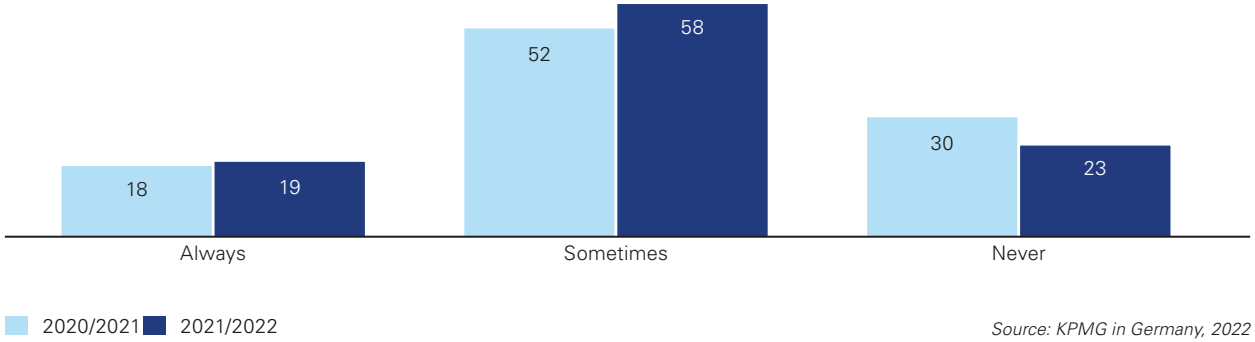
Based on a comparative price setting (e.g. peer group), suitable multiples are determined by analyzing capital market data which are then applied to the company subject to valuation.

Although 77 percent of the participating companies use plausibility calculations based on multiples (e.g., for valuations in general), only 19 percent consider them to be an integral component.

The most frequently used multiple is the EBITDA multiple, followed by EBIT and sales multiples.

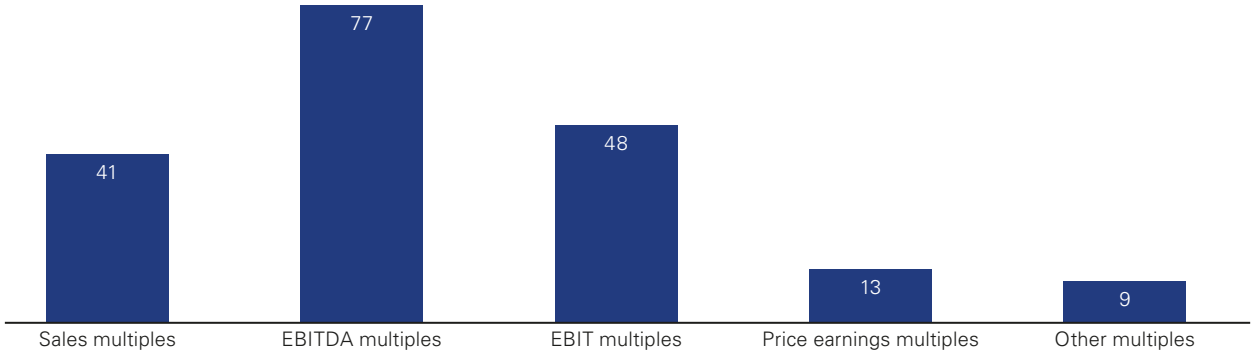
To support price determination, KPMG Multiples allows insights into helpful benchmark data. The tool quickly provides access to current market multiples.

Figure 55:
Application of multiples
Total (in percent)



Source: KPMG in Germany, 2022

Figure 56:
Type(s) of multiples used for the plausibility of valuation results or other valuation considerations
Total (in percent, multiple choices possible)



Source: KPMG in Germany, 2022

5

Relevance of Value and Value Enhancement

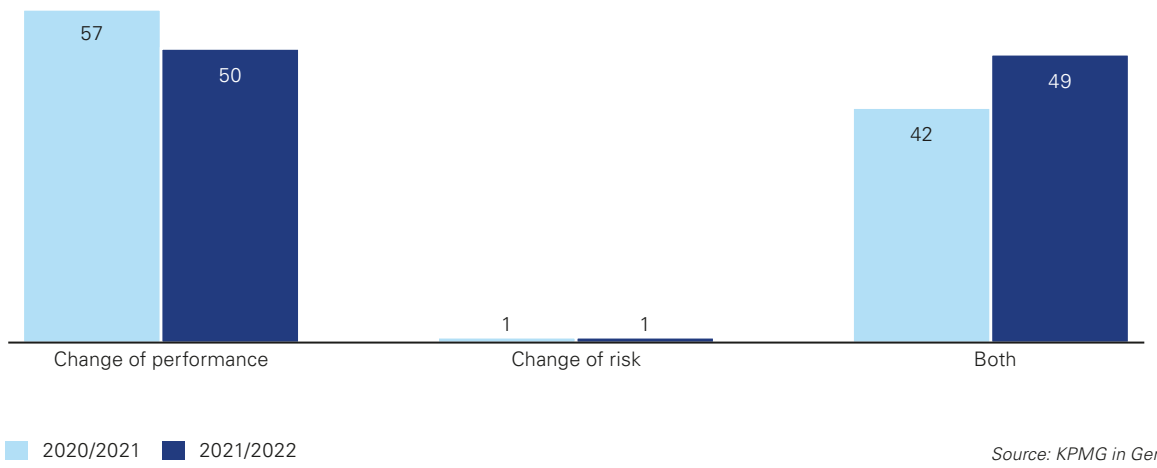
5.1 Monitoring Value Enhancement

The value of a company's investments shapes its future value. To avoid future value losses due to today's dynamically changing market conditions, risk and performance patterns should be consistently monitored.

Evaluating investments retrospectively is an important factor in improving the decision-making process regarding future investments.

Compared to the previous year, the number of study participants that only focus on the change of performance slightly decreased by 7 percent. In view of the increasingly dynamic and uncertain market conditions, we instead see an increasing number of study participants focusing on both risk and performance monitoring.

Figure 57:
Monitoring of value enhancement
Total (in percent)



Source: KPMG in Germany, 2022

5.2 Sustainability / ESG

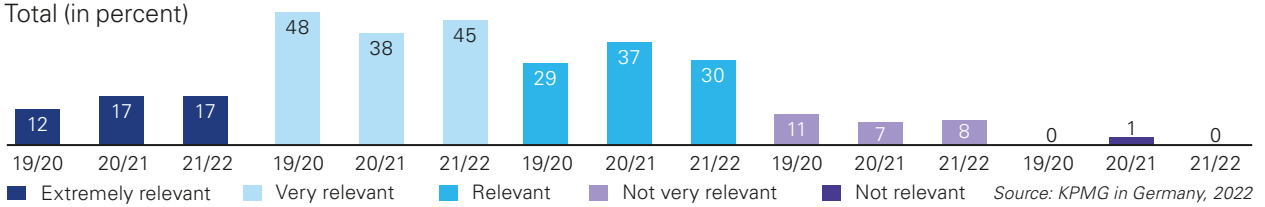
The importance of sustainability issues for companies, their employees and shareholders has increased significantly over the past few years. ESG challenges are diverse and include environmental, ecological, economic, social and political factors, and have now been incorporated into many aspects of how companies operate today. The role of ESG criteria in corporate governance and corporate decision-making processes is becoming increasingly important. Whether ESG aspects will have an impact on margins in the mid- to long term and how viable entire business models will be in the future is still questionable.

The number of participating companies that consider the impact of ESG issues on their future business development at least relevant continuously increases, while the number of participants dismissing the importance of ESG remains at a relatively low level.

The study results underline that the importance of ESG for future business developments is dependent on the industry. Compared to the previous year, the relevance of ESG issues increased in most industries, especially in the Media & Telecommunications sector.

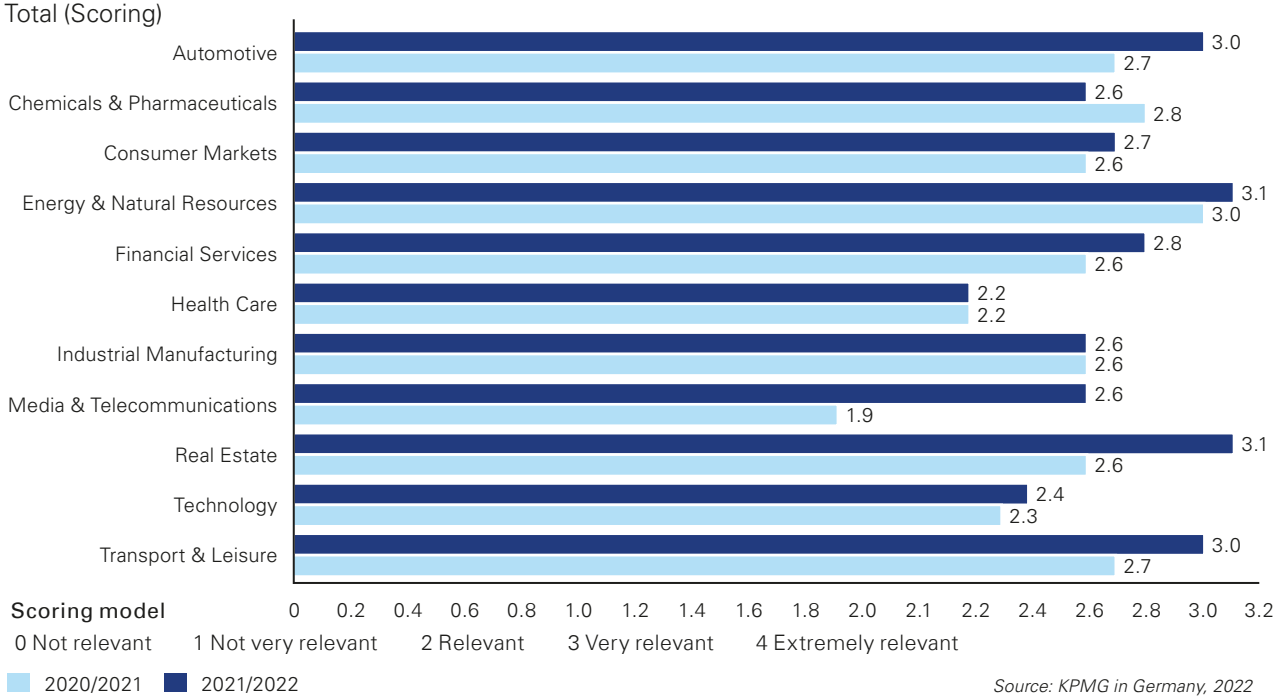
As in the previous year, it can again be observed that resource-intensive industries and industries where environmental issues play a key role, such as Automotive, Energy & Natural Resources, Real Estate and Transport & Leisure are more sensitive to ESG issues than other industries.

Figure 58:
Impact of ESG issues on future business development
Total (in percent)



Source: KPMG in Germany, 2022

Figure 59:
Relevance of ESG issues by industry
Total (Scoring)



Source: KPMG in Germany, 2022

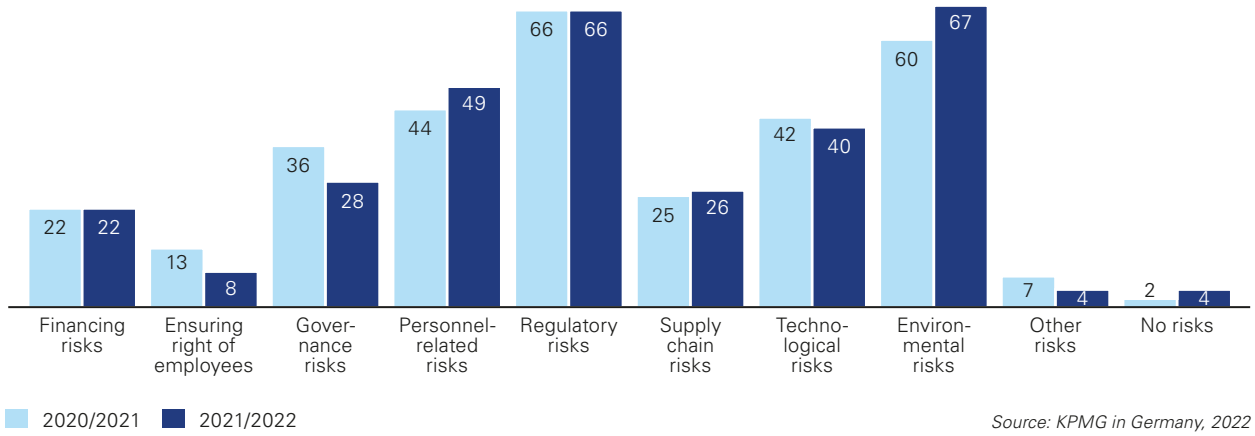
Regarding the way companies manage ESG-related risks, largely depends on the particular risks they face.

The primary sources of risk that study participants see in relation to ESG are environmental and regulatory risks. Considering the efforts to address climate change and the resulting regulatory-related transformation within industries (e.g. Automotive), this result is not surprising. Other risks that are becoming increasingly important to the study participants are people-related risks, possibly due to growing discrepancies and tensions on the labor market.

ESG has found its way into financial reporting for the vast majority of survey respondents, either through the inclusion of ESG impacts in cash flows (56 percent) or in the cost of capital (five percent) or both (three percent).

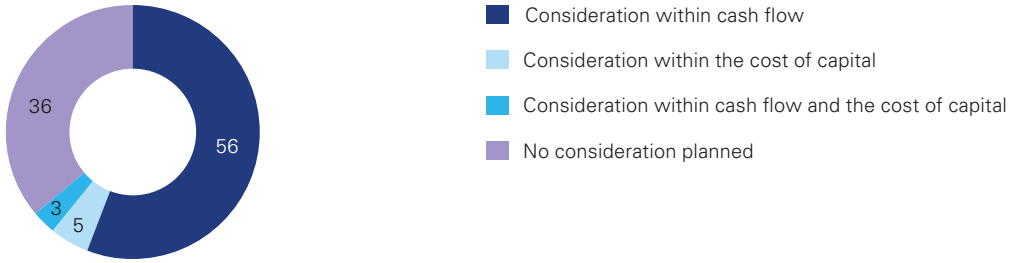
Overall, there is a clear trend that ESG will remain a highly relevant topic in the future, which means that it will be increasingly important to capture the impact of ESG-driven changes on business models in a transparent and appropriate manner.

Figure 60:
Risks arising from ESG
Total (in percent, multiple choices possible)



Source: KPMG in Germany, 2022

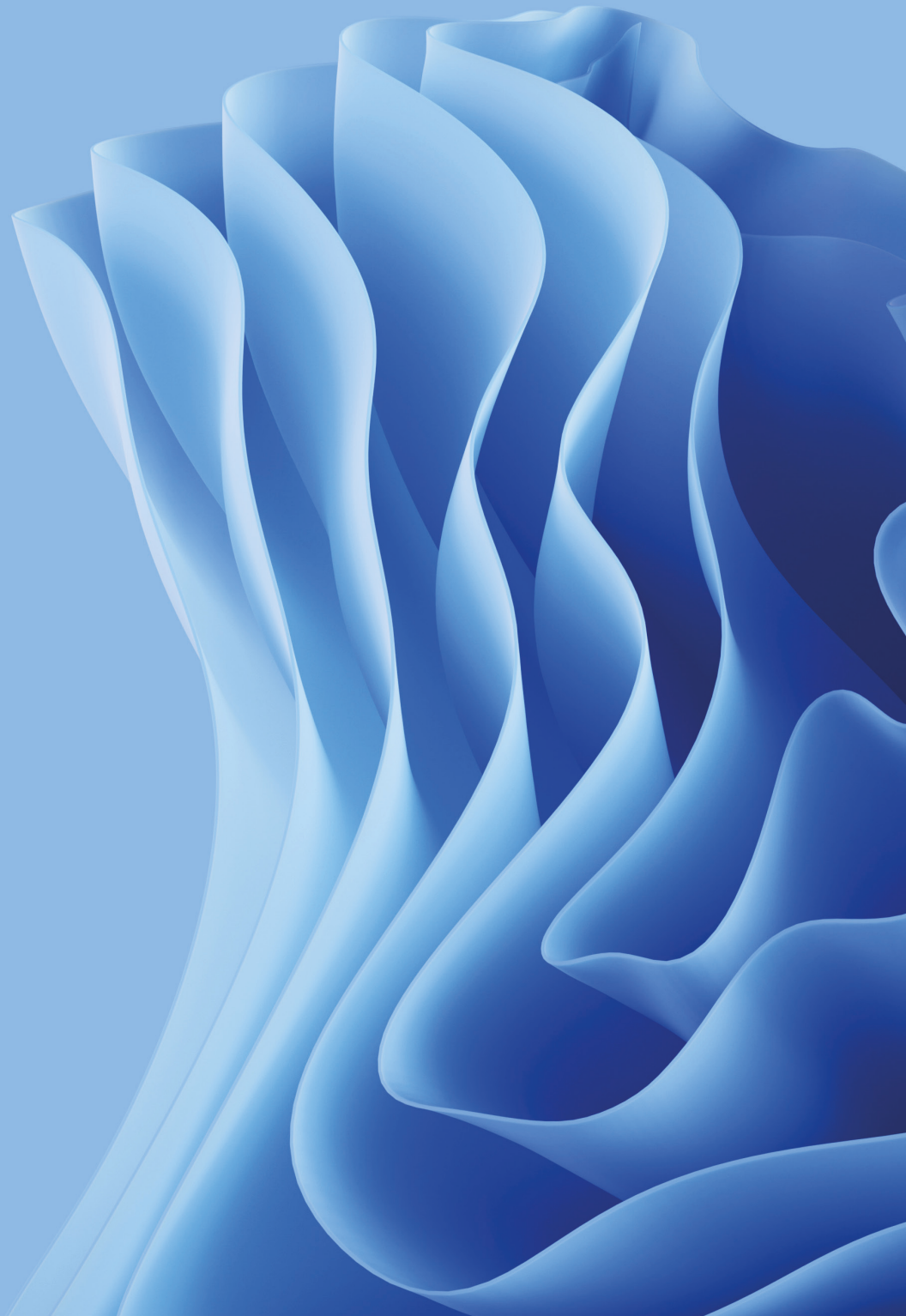
Figure 61:
Consideration of ESG implications within the financial planning
Total (in percent)



Source: KPMG in Germany, 2022

6

Further Information



6.1 Online Industry Analyses

All industry-specific cost of capital parameters are provided in addition to the findings of this study.

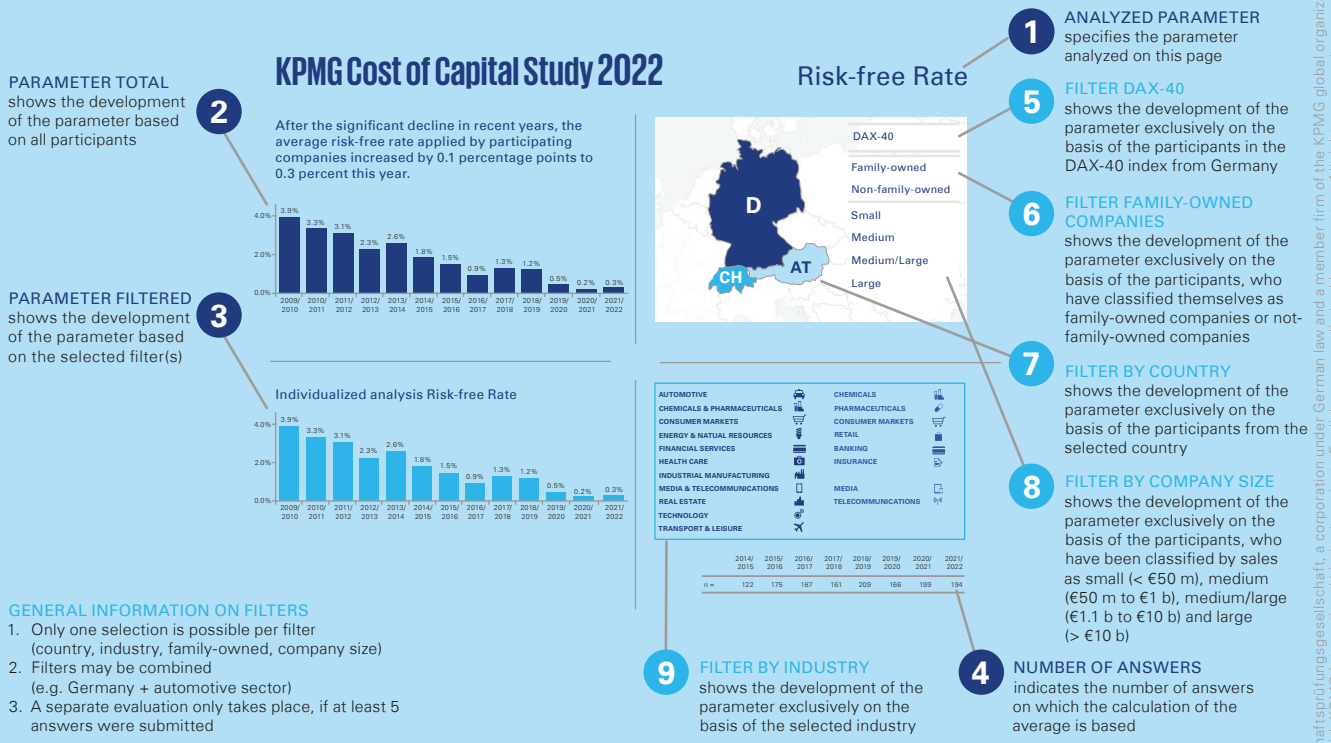
The data can be accessed via **https://hub.kpmg.de/cost-of-capitalstudy-2022**. Both the forecasting figures as well as the cost of capital parameters from this year's and previous studies are included.

In the interactive online version, search criteria can be individually selected in order to retrieve industry- and/or country-specific information and to display developments over time.

The level of detail of industries can be increased by selecting the data of sub-sectors.

As in the previous year, we have performed separate assessments of sector/sub-sectors for which we had responses from at least five participants.

Figure 62:
Instructions for KPMG Cost of Capital Study 2022 interactive



Source: KPMG in Germany, 2022

6.2 KPMG Digital Solutions

In addition to the cost of capital survey, KPMG Valuation Germany offers a variety of digital products. Our services combine transaction expertise with the technological competence of our international network. This enables you to efficiently master challenges in the context of transactions or company valuation and make better decisions in the process.

Further information can be found at **www.kpmg.de/cost-of-capital**.

- Ready-to-use solutions
- Used around the world
- Access at any time
- Excel download function
- Developed by our valuation and technology experts

Figure 63:
Additional KPMG tools for self-use

KPMG Valuation Data Source
Relevant Cost of Capital Parameters at a Glance

- All relevant parameters available from a single data source (risk-free interest rate, market and country risk premium, inflation spread, tax rate, beta coefficients, credit spread, gearing)
- WACC and Cost of Equity calculation based on your individual peer group
- Monthly update of quality assured data
- Access to more than 150 countries and 13,500 companies

KPMG Multiples
Pricing with foresight

- Peer group-specific trading multiples (sales, EBITDA, EBIT, earnings, book value to market value of equity)
- Individual analysis and adjustment options: exclusion of outliers or specification of multiples bandwidth for the display of results
- Monthly update of quality-assured data
- Access to more than 13,500 companies worldwide

KPMG Pre-Deal PPA
Transparency for clear transaction decisions

- Purchase price analysis: Attribution of success/ risk potentials to relevant assets or debt
- Analysis and consideration of attributable synergies and dyssynergies and their impact on purchase price
- Impact of transaction on asset, financial and profit position
- KPMG PPA benchmark data and sector expertise to support the validation and categorisation of results

KPMG Startup Finance App
Financial planning and reporting with an impact

- Certainty in business planning through clear guidance in the creation, analysis and interpretation of relevant key figures
- All relevant key figures, such as cash burn rate. equity development, working capital, cash conversion cycle at a glance
- Breakdown of key value drivers such as price/ volume framework, customer analysis, sales margins, seasonal fluctuations and growth rates

6.3 KPMG Valuation Publications

KPMG in Germany also publishes its regular Valuation News. In addition, in 2020 the second edition of the "Praxiswissen Unternehmensbewertung" book was released.

Valuation News is an online newsletter published three times a year that informs about present topics relevant for the valuation of companies and assets. Our latest newsletter from Autumn 2022 addresses the topics of rising inflation and its impact on corporate valuations, the use of ESG data for sustainability reporting, and the use of implicit lease rates when applying IFRS 16 in practice. Valuation News can be accessed via the following link: **Valuation News – Herbst 2022 – KPMG Deutschland**.

In December 2020, the second edition of the "Praxiswissen Unternehmensbewertung" book was published. It includes explanations and assistance on several topics related to the valuation of companies and assets under the following sections:

- Regulatory-driven valuations
- Company valuations in the context of transactions and other decision-making processes (value-based management)
- Company valuations for tax purposes
- Accounting-driven valuations
- Industry- and company-specific valuation issues
- Valuations of individual assets
- Determination of the cost of capital

Figure 64:
KPMG Valuation publications


KPMG

Valuation News

Deal Advisory
September 2022

Editorial

Sehr geehrte Leserinnen und Leser,

wir freuen uns, Ihnen mit dieser 36. Ausgabe unserer Valuation News erneut aktuelle Themen in Bezug auf die Bewertung von Unternehmen und Vermögenswerten vorstellen zu können.

Im ersten Beitrag beleuchten wir die Auswirkungen der aktuell hohen Inflation auf die Unternehmensbewertung und die Höhe der Unternehmenswerte. Der Beitrag zeigt auf, dass zwischen den die Unternehmens-Cashflows individuell treffenden unternehmensspezifischen Inflationsraten auf der einen Seite und den in den Renditeforderungen der Investoren reflektierten allgemeinen (konsumorientierten) Inflationsrate auf der anderen Seite zu unterscheiden ist.

Anschließend befassen wir uns mit der Nutzung von ESG-Daten im Rahmen von Bewertungskalkülen und zeigen auf, wie eine Identifikation, Quantifizierung und Implementierung von ESG-Aspekten im Rahmen einer Analyse eines Geschäftsmodells und damit auch im Rahmen einer Unternehmensbewertung erfolgen kann.

Der dritte Beitrag stellt einen praxisorientierten Ansatz zur Bestimmung des impliziten Leasingzinssatzes nach IFRS 16 für Zwecke der Bewertung von Leasingverbindlichkeiten vor. Dabei wird aufgezeigt, dass die Anwendung des impliziten Leasingzinssatzes voraussetzt, dass der Leasingnehmer auf Informationen des Leasinggebers zurückgreifen kann.

Inhalt

1 **Inflation –** und ihre Auswirkungen auf Unternehmenswerte *Seite 2*

2 **Nutzung von ESG-Daten –** Einblicke in Geschäftsmodelle über die finanziellen Kennzahlen hinaus *Seite 6*

3 **IFRS 16 –** Der implizite Leasingzinssatz in der Praxis *Seite 10*

Wir wünschen Ihnen eine spannende Lektüre und freuen uns über Ihr Feedback. Auch Anregungen, Themenvorschläge und weiterführende Diskussionen sind jederzeit willkommen. Gerne stehen wir darüber hinaus für Ihre individuellen Fragen zur Verfügung. Sie erreichen uns unter de-valuation-news@kpmg.com.

Mit freundlichen Grüßen

Stefan Schöniger
Partner

Dr. Andreas Tschöpel
Partner

List of Abbreviations

ATX	Main Austrian Stock Exchange
BNetzA	Bundesnetzagentur
CAPM	Capital Asset Pricing Model
CGU	Cash Generating Unit
DAX	Main German Stock Exchange
DAX-40	The 40 largest blue chips on the main German Stock Exchange
DCF	Discounted Cashflow
Debt Ratio	Ratio of Market Value of (Net) Debt to Market Value of Total Capital (Entity Value)
EBIT	Earnings Before Interest and Taxes
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
ECB	European Central Bank
ESG	Environmental, Social and Governance
FamDAX	DAXplus Family 30 Index, consists of the 30 largest and most liquid family-owned businesses (founding family holds at least 25 percent of the voting rights or seat in the management board of advisory board and 5 percent of the voting rights) in the Prime Standard of the German Stock Exchange
FAUB	"Fachausschuss für Unternehmensbewertung und Betriebswirtschaft des IDW": Technical Committee for Business Valuation and Economics of the IDW
IAS	International Accounting Standards
IDW	"Institut der Wirtschaftsprüfer in Deutschland e.V.": Institute of Public Auditors in Germany, Incorporated Association
IFRS	International Financial Reporting Standards
KFS/BW	"Fachsenat für Betriebswirtschaft in Österreich des KSWÖ": Council of Experts for Business Administration
KSW	"Kammer der Steuerberater und Wirtschaftsprüfer in Österreich": Chamber for Tax Advisors and Auditors in Austria
M&A	Mergers & Acquisitions
MDAX	German Mid Caps Stock Index
MRP	Market Risk Premium
NEP 2035	Netzentwicklungsplan 2035
PPA	Purchase price allocation
SDAX	Small Caps, the companies following the MDAX with market capitalization and exchange turnover
SMI	Main Swiss Stock Exchange
WACC	Weighted Average Cost of Capital

Your Industry Specialists

KPMG in Germany

Automotive
Olaf Thein
Partner
Head of Valuation Germany
T +49 89 9282-1579
othein@kpmg.com

Consumer Markets
Retail
Karen Ferdinand
Partner
T +49 69 9587-6500
kferdinand@kpmg.com

Consumer Markets
Retail
Stephan Fetsch
Partner
T +49 221 2073-5534
stephanfetsch@kpmg.com

Building & Construction
Industrial Products
Michael Hahn
Director
T +49 711 9060-41163
michaelhahn@kpmg.com

Financial Services
Gudrun Hoppenburg
Director
T +49 69 9587-2640
ghoppenburg@kpmg.com

Insurance
Christian Kern
Director
T +49 69 9587-3524
christiankern@kpmg.com

Energy & Natural Resources
Michael Killisch
Partner
T +49 211 475-6325
mkillisch@kpmg.com

Chemicals & Pharmaceuticals
Health Care
Christian Klingbeil
Partner
T +49 89 9282-1284
cklingbeil@kpmg.com

Chemicals & Pharmaceuticals
Health Care
Patrick Klingshirn
Director
T +49 89 9282-4594
pklingshirn@kpmg.com

Technology. Media &
Telecommunications
Private Equity/Venture Services
Dr. Michael Kramer
Partner
T +49 89 9282-4213
michaelkramer@kpmg.com

Technology
Telecommunications
Dr. Gunner Langer
Director
T +49 69 9587-2830
glanger@kpmg.com

Real Estate
Gunther Liermann
Partner
T +49 69 9587-4023
gliermann@kpmg.com

Real Estate
Andreas Lohner
Director
T +49 89 9282-4926
alohner@kpmg.com

Financial Services
Rudolf Maurer
Director
T +49 89 9282-1348
rudolfmaurer@kpmg.com

Retail
Stephan Pastusiak
Director
T +49 211 475-7285
spastusiak@kpmg.com

Automotive
Jens Schmoll
Partner
T +49 89 9282-4297
jschmoll@kpmg.com

Consumer Markets
Telecommunications
Transport & Leisure
Stefan Schöniger
Partner
T +49 40 32015-5690
sschoeniger@kpmg.com

Industrial Manufacturing
Dr. Jakob Schröder
Partner
T +49 89 9282-1471
jakobschroeder@kpmg.com

Media
Heike Snellen
Director
T +49 211 475-7062
hsnellen@kpmg.com

Public Sector
Building & Infrastructure
Transport & Leisure
Dr. Andreas Tschöpel
Partner
T +49 30 2068-1488
atschoepel@kpmg.com

Real Estate
Sven Weberbauer
Director
T +49 211 475-7059
sweberbauer@kpmg.com

Private Equity/Venture Services
Christian Weidinger
Partner
T+49 89 9282-1694
cweidinger@kpmg.com

Industrial Manufacturing
Ralf Weimer
Director
T +49 89 9282-1150
rweimer@kpmg.com

Financial Services
Frieder Zschiesche
Partner
T +49 711 9060-43797
fzschiesche@kpmg.com

KPMG in Austria

Dr. Klaus Mittermair
Partner
Head of Deal Advisory Austria
T +43 732 6938-2151
kmittermair@kpmg.at

Victor Purtscher
Partner
T +43 1 31332-3700
vpurtscher@kpmg.at

KPMG in Switzerland

Johannes Post
Partner
Deal Advisory
Global Head of Valuation Services
T +41 58 249-3592
jpost@kpmg.com

Rolf Langenegger
Director
T +41 58 249-4271
rlangenegger@kpmg.com

Simon Laval
Director
T +41 58 249-4630
slaval@kpmg.com

Contact

KPMG in Germany

Overall responsibility

Stefan Schöniger
Partner
Deal Advisory, Valuation
KPMG AG
Wirtschaftsprüfungsgesellschaft
Fuhlentwiete 5
20355 Hamburg
T +49 40 32015-5690
sschoeniger@kpmg.com

Heike Snellen
Director
Deal Advisory, Valuation
KPMG AG
Wirtschaftsprüfungsgesellschaft
Tersteegenstraße 19-23
40474 Düsseldorf
T +49 211 475-7062
hsnellen@kpmg.com

Dr. Andreas Tschöpel
Partner
Deal Advisory, Valuation
KPMG AG
Wirtschaftsprüfungsgesellschaft
Klingelhöferstraße 18
10785 Berlin
T +49 30 2068-1488
atschoepel@kpmg.com

www.kpmg.de

www.kpmg.de/socialmedia