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Climate risk and corporate valuations

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Content

Executive Summary

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- **Investors today face dual climate risks that stem from both the transition to a sustainable economy and the increasing severity of physical climate events.** Transition risks arise from rapid policy changes, technological innovations and evolving market behaviors, while physical risks include the damaging impacts of extreme weather, rising sea levels, prolonged droughts or productivity losses for workers exposed to heat. Together, these risks accelerate the devaluation of assets, potentially rendering them stranded long before the end of their expected lifecycles.

- **Fossil fuels are not the only sector on the watchlist. Real estate, automotive, agriculture and heavy industry are also increasingly vulnerable due to stricter energy standards, rapid technological advancements and tighter regulatory measures.** In this context, investors need to reassess their portfolios across a diverse array of industries to fully capture the potential impact of climate-related disruptions.

- **To identify which sectors are most at risk, we integrate three NGFS transition scenarios (Baseline, Net Zero 2050 and Delayed Transition) into two traditional financial valuation methods: Discounted Cash Flow (DCF) and Interest Coverage Ratio (ICR).** Under the baseline scenario, current Nationally Determined Contribution plans are realized and even slightly improved but fail to reach a 2°C consistent pathway. The Net Zero scenario represents an aggressive policy environment with ambitious carbon-reduction targets, prompting an immediate yet more predictable revaluation that favors renewable energy, low-carbon technologies and sustainable business models, while stranding high-emission assets sooner. In contrast, in the Delayed Transition, policy intervention is postponed, triggering a sudden and disorderly asset repricing when climate action becomes inevitable, which is likely to destabilize brown sectors.

- **Overall, we find that the technology and healthcare sectors show resilience under all climate transition scenarios in both the US and Europe, while the energy sector faces heightened vulnerability due to rising operational costs and regulatory pressures.** DCF assessments under the Net Zero 2050 scenario reveal significant sector-specific corrections on both sides of the Atlantic. In the US, healthcare and consumer discretionary would each drop by roughly -16%, while energy and basic resources would face smaller declines of around -6% to -7%, reflecting partial adaptation via renewables and critical materials. In contrast, in Europe, real estate would suffer a severe hit of -40%, with telecommunications (-26.3%) and consumer staples (-24.8%) also seeing major setbacks. Even though basic resources (-11.9%) and technology (-11.7%) fare better by comparison, these results highlight the varying vulnerabilities each sector faces under aggressive climate policies. A well-orchestrated transition could help reduce the scale and speed of market disruptions in both regions.

The ICR method reinforces the argument for an orderly transition. In the Net Zero 2050 pathway, both US and European sectors with heavier capital requirements – such as energy and utilities – would experience notable ICR declines, indicating higher capital expenditures and steeper CO_2 pricing. Yet under a Delayed Transition, basic resources and utilities would show moderate ICR improvements on both sides of the Atlantic, reflecting the near-term relief of slower policy changes. However, this reprieve risks compounding longer-term vulnerabilities as abrupt policy reversals or sudden shifts in market sentiment may ultimately trigger sharper and more destabilizing adjustments for those sectors. All in all, despite the initial valuation declines in sectors like healthcare and consumer discretionary under a Net Zero 2050 scenario, it is the only one that ensures long-term economic resilience.

- **Against this backdrop, proactive risk management is essential for safeguarding long-term portfolio value in an era of rapid climate change.** Early adoption of adaptive strategies, driven by comprehensive scenario analyses, can help investors mitigate the risks of asset stranding. By positioning portfolios to respond swiftly to emerging climate policies and market dynamics, investors not only limit potential losses but also capitalize on opportunities presented by the growing green economy.

Fossil fuels are not the only sector at risk

As the global economy shifts toward sustainability, investors will continue to face both transition and physical climate risks, impacting their portfolio performance and allocation. Transition risks – driven by policy changes, technological innovations and evolving consumer behaviors – can quickly diminish the value of assets tied to carbon-intensive processes. Meanwhile, physical risks such as extreme weather events, rising sea levels and prolonged droughts threaten the infrastructure and operations supporting these investments. Combined, these factors can result in assets losing economic viability before the end of their expected lifecycles, also known as stranded asset risks.

Yet, evaluating climate-related valuation risk remains complex. Rapid policy shifts and technological breakthroughs can undermine long-term forecasts. For example, new regulatory measures aimed at reducing emissions may alter market dynamics, leaving once-valuable assets vulnerable. Similarly, technological disruptions can transform entire industries, complicating predictions of asset performance in a low-carbon future. In this dynamic environment, investors need to adopt flexible climate-related risk-assessment strategies that can quickly adjust to emerging market realities.

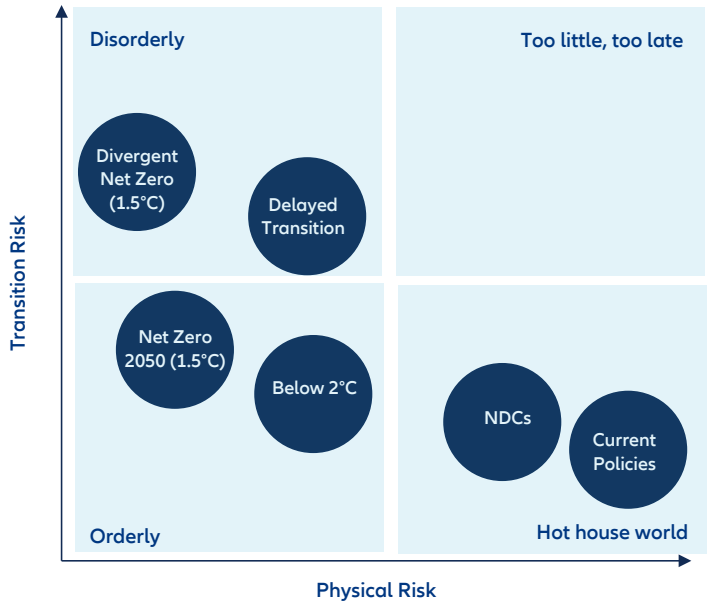
Another significant challenge is the scarcity of high-quality, granular data. Without detailed insights into regional climate trends, sector-specific vulnerabilities, corporate-specific data and the pace of technological change, accurately estimating the timing and scale of asset devaluation remains challenging. Moreover, the interconnected nature of global markets means that local disruptions can trigger cascading effects across multiple sectors, emphasizing the need for an integrated approach that bridges climate science and financial analysis. Despite these hurdles, assessing stranded asset risk is indispensable for protecting long-term portfolio value. Proactive identification of risk factors should enable investors to implement timely remedial measures, limit potential losses and enhance risk-adjusted returns. Moreover, tailoring risk-management strategies to address the unique challenges of different sectors should not only improve resilience but also support more informed investment decisions in an era of accelerating climate impacts. In this regard, by carefully analyzing sector-specific risks and opportunities, investors should be able to shield their portfolios from immediate shocks while positioning themselves to benefit from emerging trends within the future green economy.

Real estate, automotive, agriculture, infrastructure and heavy industry are all exposed to stranded asset risks arising from regulatory shifts, market changes and technological progress. Stranded asset risks extend beyond direct holdings in high-carbon sectors. In real estate, for example, stricter energy efficiency standards and the high cost of retrofitting outdated buildings are driving asset devaluations. Older properties with poor insulation and obsolete heating systems risk becoming uneconomical, leading to significant financial losses for investors, lenders and insurers. For the automotive industry, as electric vehicles (EVs) steadily replace internal combustion engine models, manufacturers face not only the challenge of retooling production lines but also the risk that suppliers, dealerships and supporting infrastructure linked to outdated technologies will become stranded. Companies that do not shift to EVs and/or hybrids might suffer from declining revenues and underutilized production capacities in the mid- to long run. Similarly, the agricultural sector is confronting dual pressures. It must transition from being an emitting sector to being an active carbon sink that captures CO_2 from the atmosphere while managing the financial fallout from increasingly severe weather events. Livestock farming in particular is vulnerable to tighter emission regulations. Lastly, infrastructure and heavy industries, such as steel production and pipeline networks, are at risk of obsolescence as markets move towards cleaner alternatives. Against this backdrop, investors and financial institutions need to reassess exposure across diverse sectors rather than focusing solely on fossil fuels, especially scrutinizing the possible interdependencies across sectors and supply chains.

Building a climate-adjusted valuation risk framework

To assess transition and physical climate risks, we use three scenarios from the Network for Greening the Financial System (NGFS), which allow us to compare various climate policies and market shifts. In the Baseline scenario (between an orderly transition and a hot house world), current Nationally Determined Contribution plans (NDC) are realized and even slightly improved but fail to reach a 2°C consistent pathway. In other words, this scenario represents the assumed most likely long-run scenario, given past developments and historic variations in climate policy. In this scenario, we observe moderate shifts in asset valuations as carbon pricing and regulatory pressures slowly intensify. However, assets in carbon-intensive sectors may eventually face devaluation. The Delayed Transition scenario (disorderly transition) assumes postponed policy intervention, triggering a sudden and disorderly asset repricing when climate action becomes inevitable, which is likely to destabilize brown sectors. Conversely, the Net Zero scenario (orderly transition) represents an aggressive policy environment with ambitious carbon-reduction targets, prompting an immediate yet more predictable revaluation that favors renewable energy, low-carbon technologies and sustainable business models, while rendering high-emission assets stranded sooner. But what all three scenarios have in common is the current underpricing of climate transition and physical risks. This suggests that financial markets have not fully priced in the likelihood of future regulations, carbon taxes, extreme climate-related events and technological disruptions, potentially leading to valuation shocks as transition policies materialize across all scenarios (Figure 1).

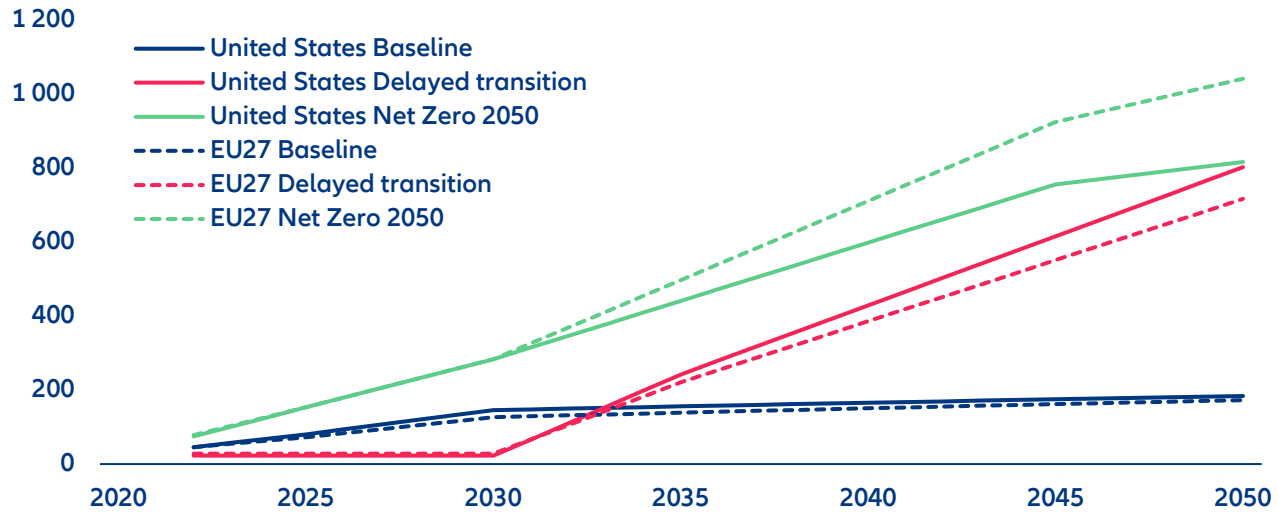
Figure 1: NGFS scenario framework



Sources: Eurostat, Allianz Research

CO_2 pricing is a key variable. Under the Baseline scenario – where no new major climate policies are introduced – CO_2 prices remain relatively low, increasing only gradually over time. In contrast, the Delayed Transition scenario reflects a postponed policy response, with CO_2 prices spiking sharply after 2030 as regulators are compelled to implement drastic measures to curb emissions. Meanwhile, the Net Zero 2050 pathway, targeting carbon neutrality by mid-century, exhibits the steepest and most consistent rise in CO_2 prices, underscoring the urgency of early and aggressive climate action. Interestingly, CO_2 prices in Europe are projected to be higher than those in the US under the Net Zero scenario, and within the NGFS framework, suggesting that Europe is likely to implement more stringent carbon-pricing mechanisms, driven by ambitious climate policies and regulatory frameworks. Additionally, the divergence in price trends between the Baseline and both transition scenarios highlights the profound ex-ante economic implications of delayed versus prompt policy interventions (Figure 2).

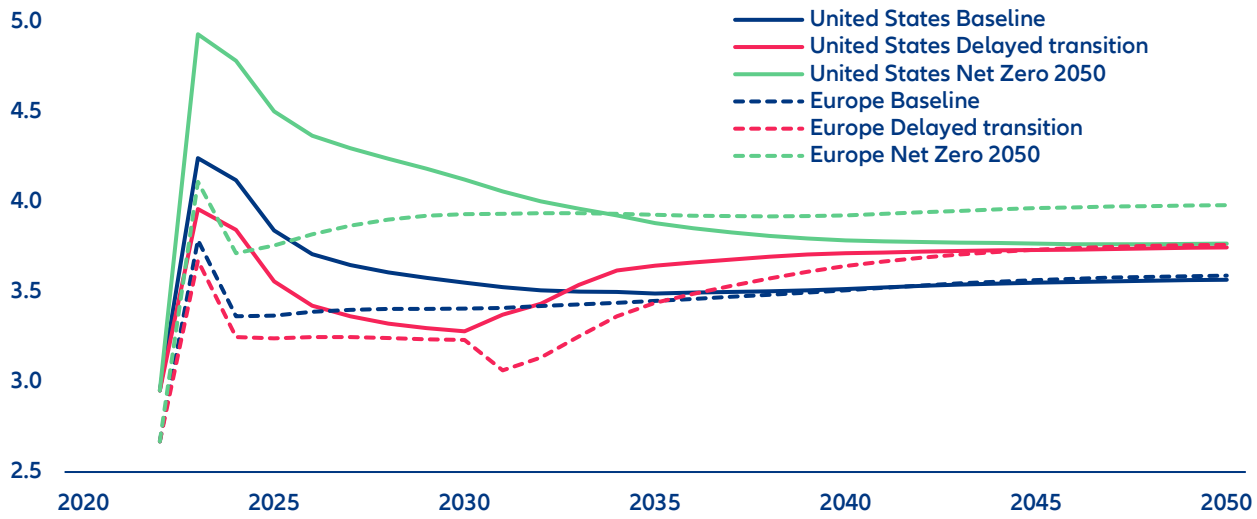
Figure 2: Carbon price in USD per metric ton of CO_2 under different scenarios



Sources: NGFS, Allianz Research. Note: Based on NiGEM results for the REMIND model

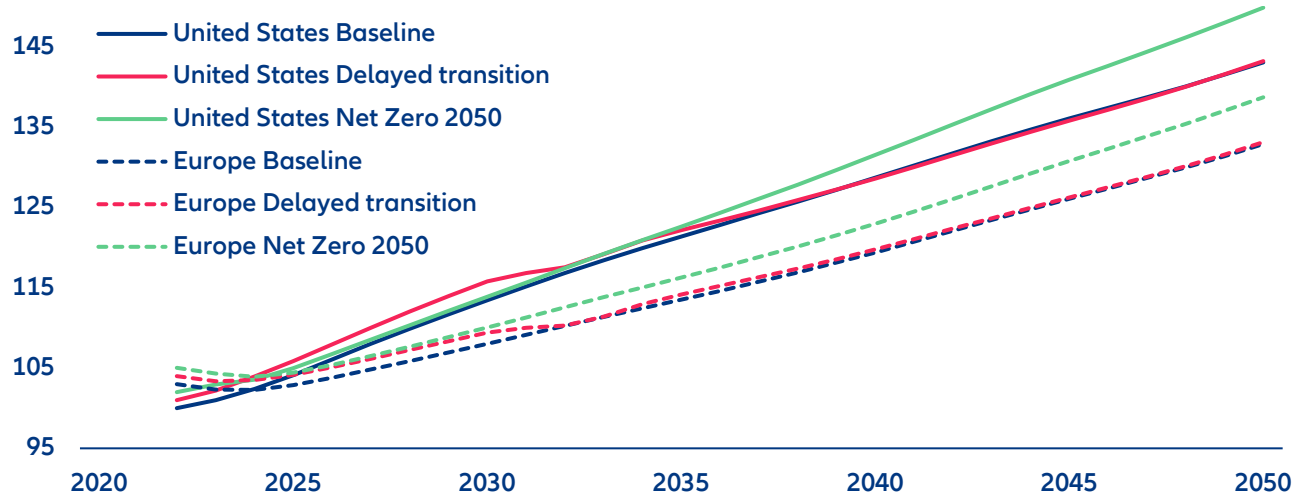
Other important variables to consider are long-term interest rates, GDP growth, equity markets and inflation. Climate transition policies will significantly influence macroeconomic and financial market dynamics. Under the Delayed Transition scenario, both the US and Europe would experience persistently higher interest rates than in the baseline scenario, driven by increased inflation expectations and elevated market uncertainty, most likely compelling central banks to adopt more restrictive policy stances. In contrast, the Net Zero 2050 scenario results in lower, more stable interest rates, reflecting the reduced financial volatility of an orderly transition (Figure 3). In turn, economic growth patterns across regions broadly align. The Baseline scenario forecasts steady growth, while the Net Zero 2050 pathway sees an initial slowdown due to investment-driven adjustments before achieving sustained long-term expansion. The Delayed Transition scenario inflicts substantial economic costs as regulatory and financial shocks are expected to disrupt productivity and capital flows. Europe's economic trajectory seems to be more stable whereas the US faces more pronounced volatility (Figure 4). Inflationary dynamics vary significantly across scenarios. The Delayed Transition case results in persistent inflationary pressures in both regions, likely driven by, amongst others, supply-chain disruptions, rising energy costs and the need to retrofit outdated infrastructure. In this framework, European inflation remains slightly lower than in the US. On the other hand, the Net Zero 2050 pathway supports a smoother inflation trajectory by fostering gradual adjustments in production and energy markets, thus likely mitigating excessive cost pressures (Figure 5). Lastly, equity market performance also diverges across transition pathways. Markets remain stable in the Baseline scenario, while the Net Zero 2050 pathway sees steady appreciation driven by renewed climate-related market optimism. The Delayed Transition scenario leads to weaker market performance due to heightened abrupt regulatory shifts and increasing climate-related stranding risks. Against this backdrop, the US stock market seems to be more sensitive to transition shocks than Europe, which seems to benefit from earlier regulatory action (Figure 6).

Figure 3: Long-term government yields in %



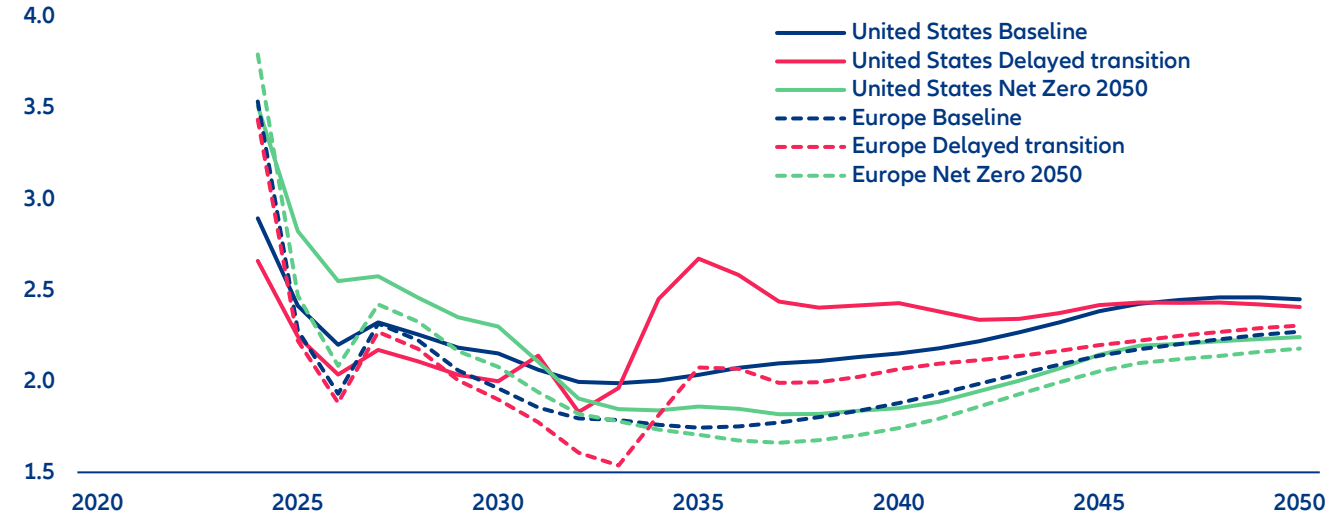
Sources: NGFS, Allianz Research

Figure 4: Real GDP (rebased Dec 2021 = 100)



Sources: NGFS, Allianz Research

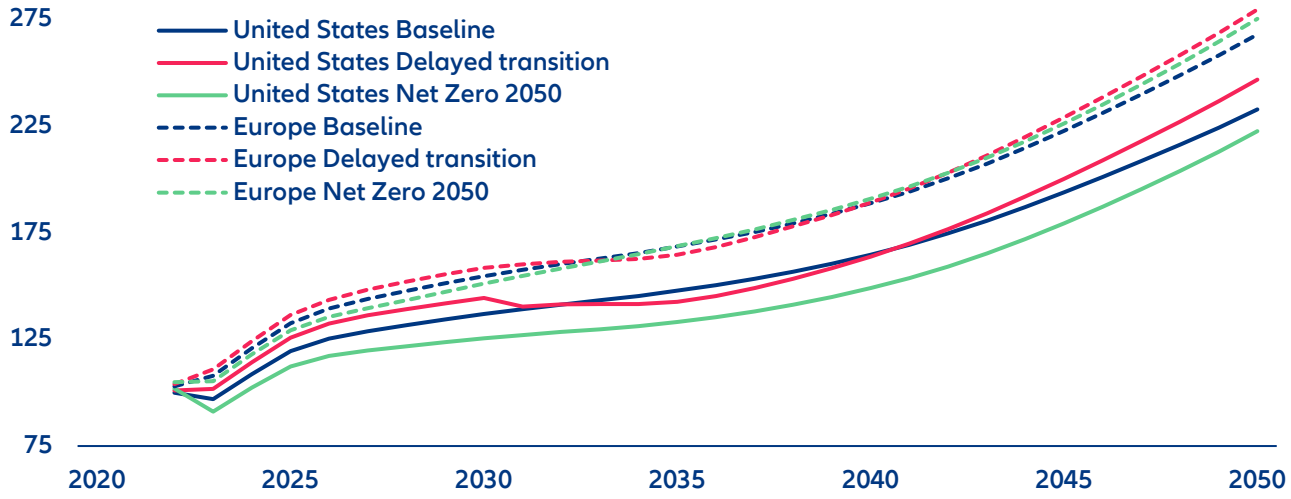
Figure 5: Inflation y/y%



Sources: NGFS, Allianz Research

Overall, Europe stands out for its greater stability under each of the scenarios, likely driven by early adaptation and stronger institutional coordination. The US, on the other hand, is more exposed to volatility, particularly in the Delayed Transition scenario, where equity and bond markets would exhibit heightened sensitivity to risk appetite. Inflationary pressures are notably stronger in the US, fueled by supply-side constraints and regulatory uncertainty. Ultimately, the Net Zero 2050 scenario promises the most stable long-term economic and financial outcomes, while the Delayed Transition pathway introduces considerable risks in both regions.

Figure 6: Equity prices (rebased Dec 2021 = 100)

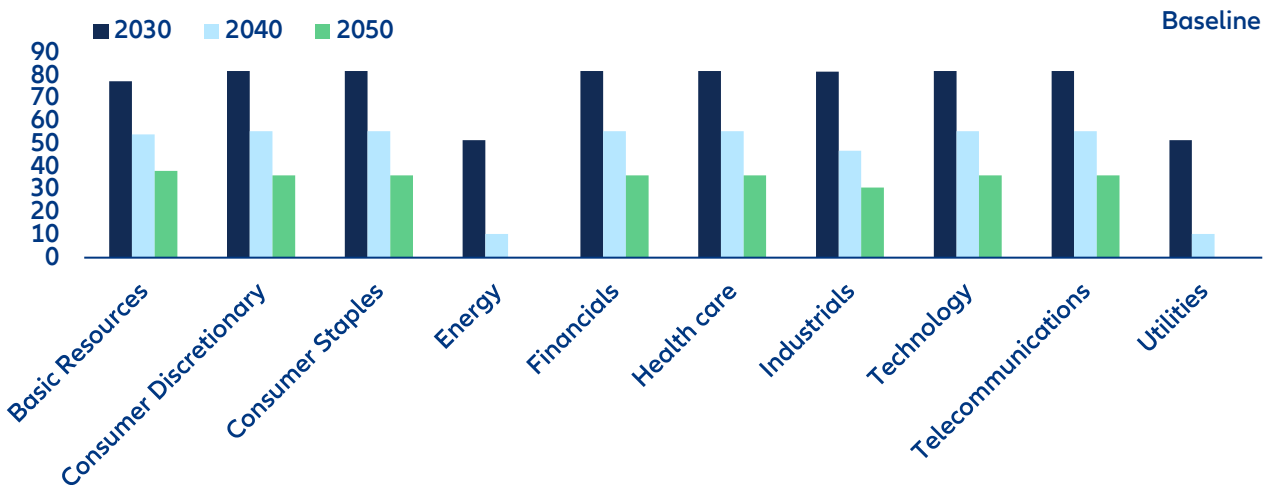


Sources: NGFS, Allianz Research

Adjusting sector-earnings for CO_2 pricing and emissions

As carbon costs rise and regulatory frameworks tighten, adjusting sector earnings for CO_2 pricing and emissions becomes crucial. Starting with the most affected, companies in carbon-intensive industries must factor in CO_2 pricing to gauge the true impact on their financial performance. Anticipating and adapting to these costs will continue to be vital for long-term stability and to avoid/mitigate stranding risk. Returning to our NGFS framework, projected emission reductions across sectors through 2050 vary by scenario. In the Baseline scenario, emissions reduce steadily, but not as aggressively as in the other two pathways. The energy and utilities sectors see the most significant declines. However, by 2050, emissions remain higher than in the more aggressive transition scenarios. Sectors like basic resources, industrials and consumer discretionary experience moderate reductions (Figure 7).

Figure 7: NGFS Baseline scenario CO_2 emissions relative to base year in % (100% = 2022)



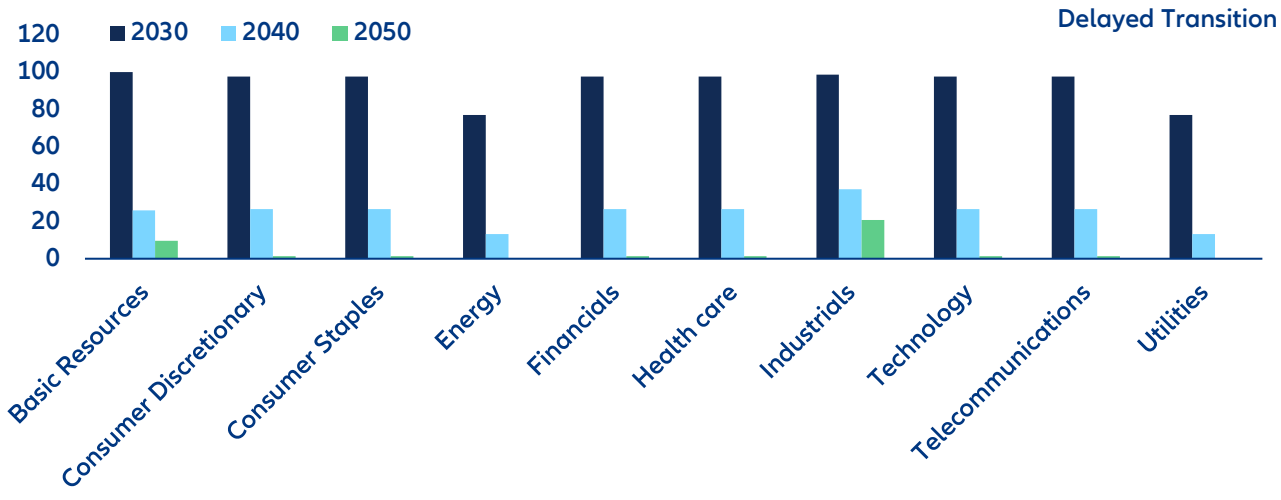
Sources: NGFS, Allianz Research

The Delayed Transition scenario (Figure 8) exhibits a more uneven decline in emissions. Emissions remain high in 2030 across all sectors, reflecting delayed policy action and continued dependence on fossil fuels. However, beyond 2040, rapid policy shifts and market adjustments force drastic emissions reductions, particularly in the energy, utilities and industrial sectors. This abrupt transition leads to challenges in adaptation, with a sudden and steep decline in high-carbon sectors. While effective in the long run, this approach may create market instability and more climate-related valuation corrections.

The Net Zero 2050 scenario (Figure 9) presents the most ambitious and structured pathway to decarbonization. Emissions decline sharply across all sectors as early investments in green technology and regulatory alignment drive sustainable reductions. Energy and utilities see the most aggressive cuts, almost completely phasing out fossil fuel use by 2050. Even historically carbon-intensive industries, such as basic resources and industrials, achieve significant reductions through technological advancements and policy incentives. Sectors like telecommunications and technology, already relatively low in emissions, also show continued improvements in efficiency.

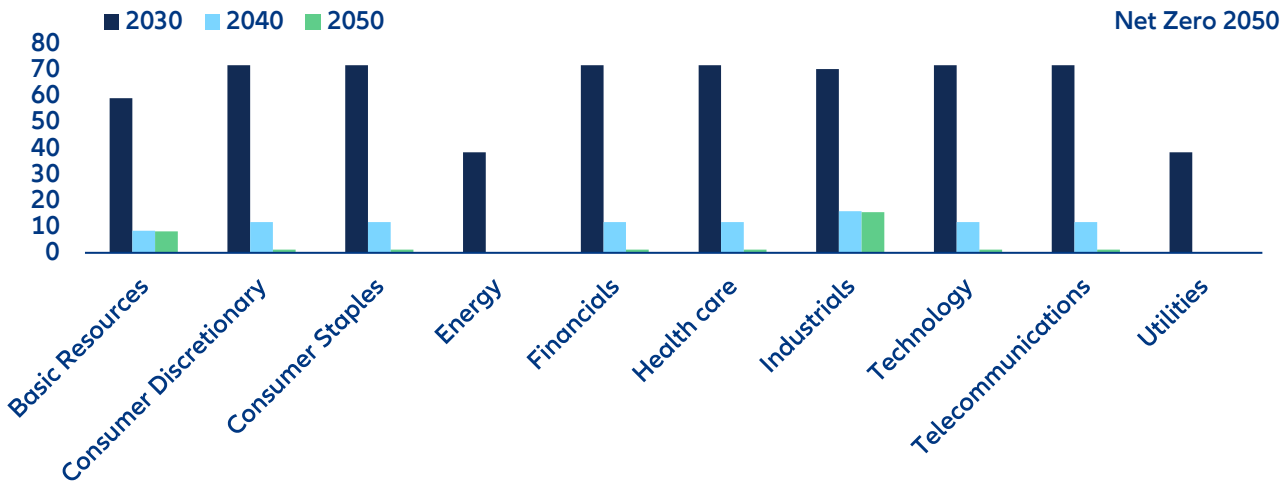
Comparing across scenarios, Net Zero 2050 represents the most stable and structured transition, avoiding the economic volatility seen in the Delayed Transition. The Baseline scenario, while showing improvements, lags significantly behind in reducing emissions to levels aligned with global climate targets. The trade-offs between a structured, long-term transition and a delayed but more abrupt shift highlight the importance of early policy intervention and market adaptation strategies.

Figure 8: NGFS Delayed Transition scenario CO_2 emissions relative to base year in % (100% = 2022)



Sources: NGFS, Allianz Research

Figure 9: NGFS Net Zero 2050 scenario CO_2 emissions relative to base year in % (100% = 2022)



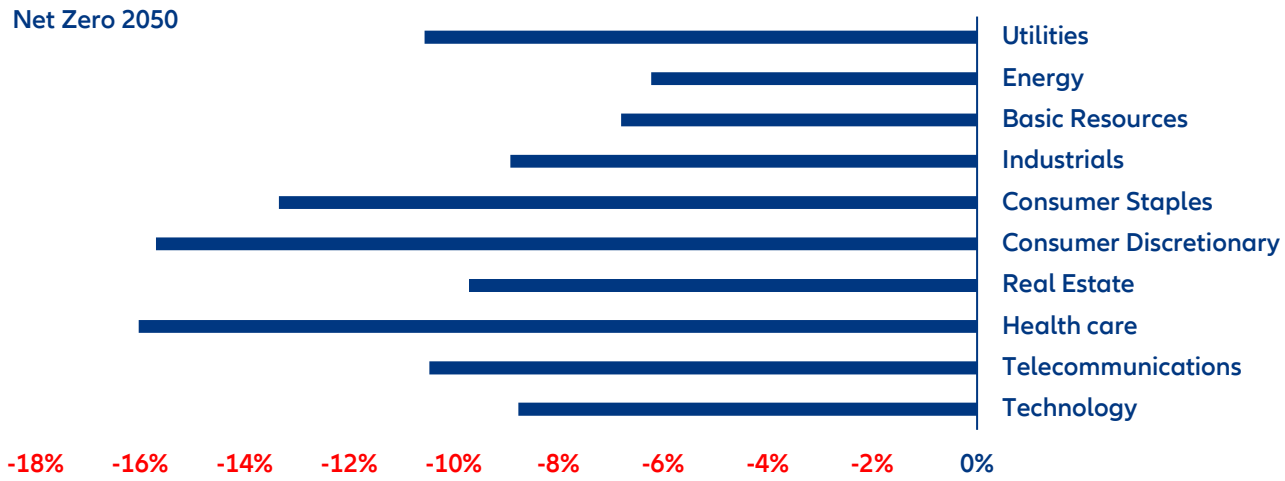
Sources: NGFS, Allianz Research

Which sectors are most vulnerable to climate risk?

To capture the financial implications of climate-related risks and opportunities, we integrate the NGFS scenarios into the Discounted Cash Flow method of estimating the present value of assets and sectors. The DCF method forecasts future cash flows and discounts them back to their value today, based on the principle that money loses value over time, meaning future cash flows must be adjusted to reflect their present-day worth. For sectors, the DCF method is used to evaluate entire industries by aggregating and analyzing the cash flows of representative entities within each sector. This approach provides a high-level perspective on industry-specific characteristics, competitive dynamics and the broader economic environment influencing sector performance. By including NGFS scenarios in the determination of the inputs, we can account for potential shifts in operational costs, revenue growth, capital expenditures and terminal growth assumptions. Moreover, NGFS-driven discount rate pathways play a significant role in sector valuation as they reflect the level of uncertainty and risk associated with different climate scenarios. Under more adverse climate conditions, increased uncertainty may warrant a higher discount rate, indicating a greater risk premium required by investors to invest in corporates within a specific sector. Conversely, a smooth transition to a greener economy may lead to more moderate adjustments in the discount rate. By projecting future cash flows, applying appropriate discounting and integrating climate-related risks, this approach allows us to derive more resilient, climate-adjusted valuations. Ultimately, this ensures that sector assessments not only reflect current financial fundamentals but also anticipate the evolving landscape driven by climate change and sustainability trends.

In the Net Zero 2050 scenario in the US, healthcare and consumer discretionary would see steep corrections of -16% as increased financing costs (healthcare) and shifting demand (consumer discretionary) reduce future cash flows. Consumer staples (-13%) are likely to face higher production costs from carbon pricing and supply-chain disruptions. The utilities sector (-11%) would see notable declines due to heavy investments in renewables and grid upgrades that, coupled with rising interest rates, would raise capital costs despite long-term green energy demand. Real estate (-10%) and telecommunications (-10%) would be moderately affected, real estate from stricter energy efficiency standards and higher financing costs and telecommunications from increased infrastructure expenses and evolving consumer behavior. Industrials (-9%) and technology (-9%) would see somewhat lower corrections. Industrial firms face higher decarbonization costs that would pressure margins, while technology's long-term growth would be tempered by higher discount rates, reducing the present value of future cash flows. Finally, basic resources (-7%) and energy (-6%) incur the smallest corrections. Energy's modest decline indicates that many firms have already priced in transition risks or diversified into renewables, and basic resources may benefit from increased demand for critical minerals in clean energy technologies. Overall, these equity corrections underscore how sector-specific vulnerabilities, inflation and rising long-term interest rates would interact under climate-related policies, with consumer sectors hit hardest, while technology, telecommunications and energy-related sectors relatively more resilient (Figure 10).

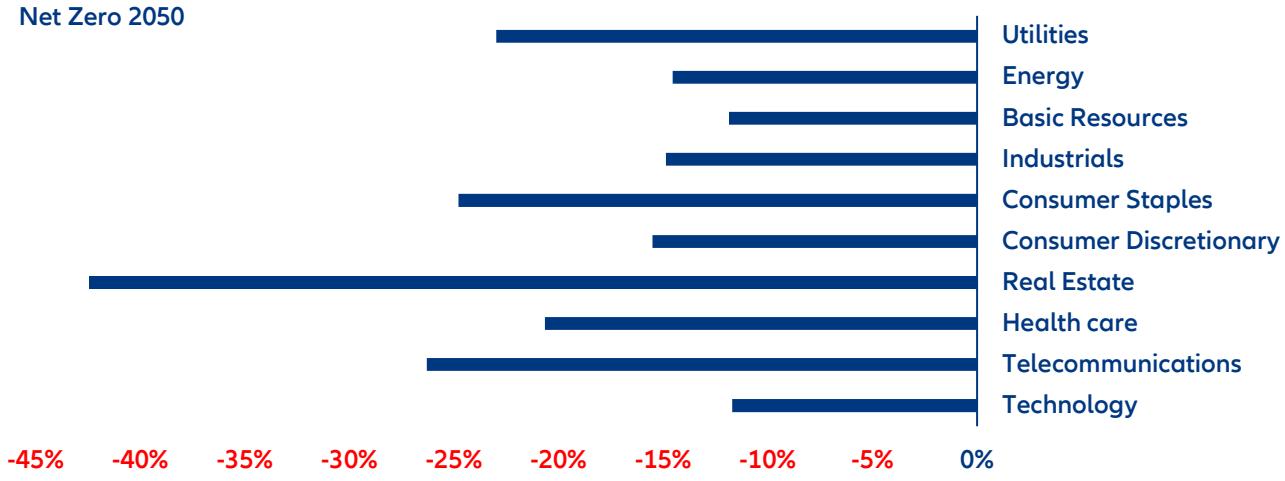
Figure 10: DCF results for US sectors – Net Zero 2050 scenario



Sources: NGFS, LSEG Workspace, Allianz Research. Note: We exclude the financial services and insurance sectors as particular balance sheet structures are not well represented by the DCF or ICR methodologies.

European sectors would face a bigger correction as the NGFS assumptions are more stringent for EU countries. Real estate stands out with the most significant drop in valuations at -40%. This sizable hit reflects its vulnerability to both transition and physical climate risks as properties need substantial retrofitting to meet new efficiency standards and are also exposed to extreme weather events or rising sea levels. Telecommunications (-26.3%) and consumer staples (-24.8%) would also see steep declines, likely due to energy-intensive operations, evolving regulations (like carbon pricing) and the potential for disrupted supply chains. Utilities (-23.0%) rounds out the higher-impact group, likely to face hefty costs to overhaul infrastructure. On the other hand, technology (-11.7%) and basic resources (-11.9%) would see relatively smaller corrections. Firms in the tech sector often have more flexible, intangible business models that can adapt more readily to climate regulations and basic resources, although carbon-intensive, may benefit from the growing demand for metals and minerals required in the low-carbon economy (e.g. for batteries and renewable energy infrastructure) (Figure 11).

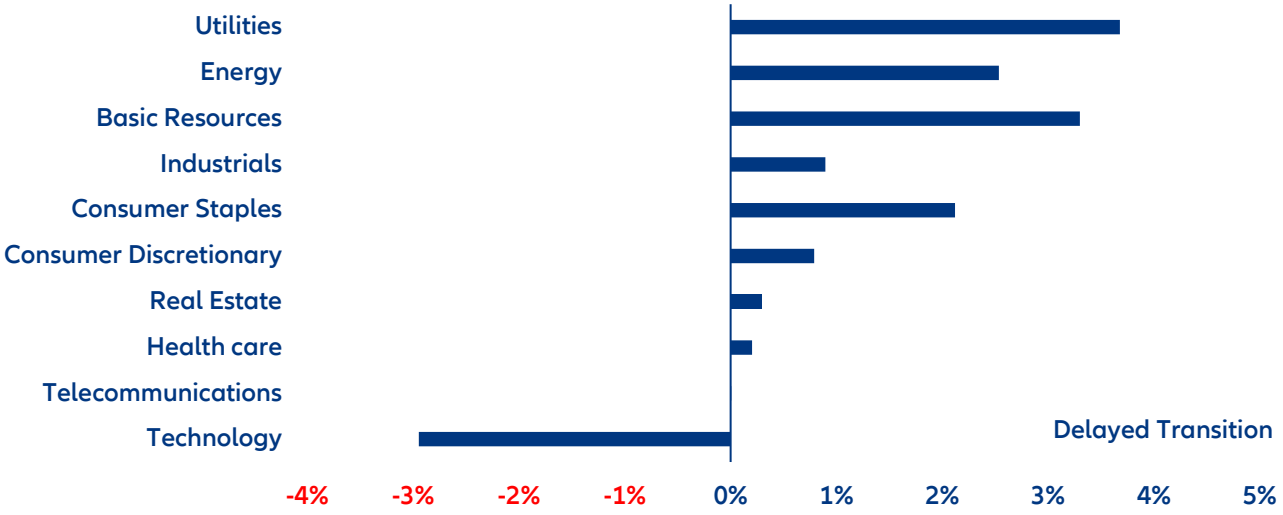
Figure 11: DCF results for European sectors – Net Zero 2050 scenario



Sources: NGFS, LSEG Workspace, Allianz Research. Note: We exclude the financial services and insurance sectors as particular balance sheet structures are not well represented by the DCF or ICR methodologies.

In the Delayed Transition scenario, the utilities (+3.7%), basic resources (+3.3%) and energy (+2.5%) sectors would perform best. These sectors are likely to benefit from slower regulatory changes, extended fossil fuel use and reduced near-term capital expenses – allowing energy firms to maintain cash flows, basic resources to enjoy steady demand and utilities to delay the costly switch to renewables. Consumer staples (+2.1%) would also gain from controlled costs. Meanwhile, consumer discretionary (+0.8%), industrials (+0.9%) and real estate (+0.3%) would see moderate gains as they face less immediate decarbonization pressure and gradual increases in transition costs. Healthcare (+0.2%) and telecommunications (0.0%) would remain largely unaffected by the delayed shift. In contrast, the technology sector would fall by -2.9% as relatively higher rates would negate the delayed effect of carbon pricing. Overall, the Delayed Transition would lead to minimal near-term disruption. Sectors that rely on traditional energy and materials would benefit, while those dependent on rapid clean-tech investment, like technology, would suffer. Although this approach stabilizes valuations compared to a Net Zero 2050 scenario, it may create long-term volatility as unaddressed climate risks could eventually force more aggressive policy changes (Figure 12).

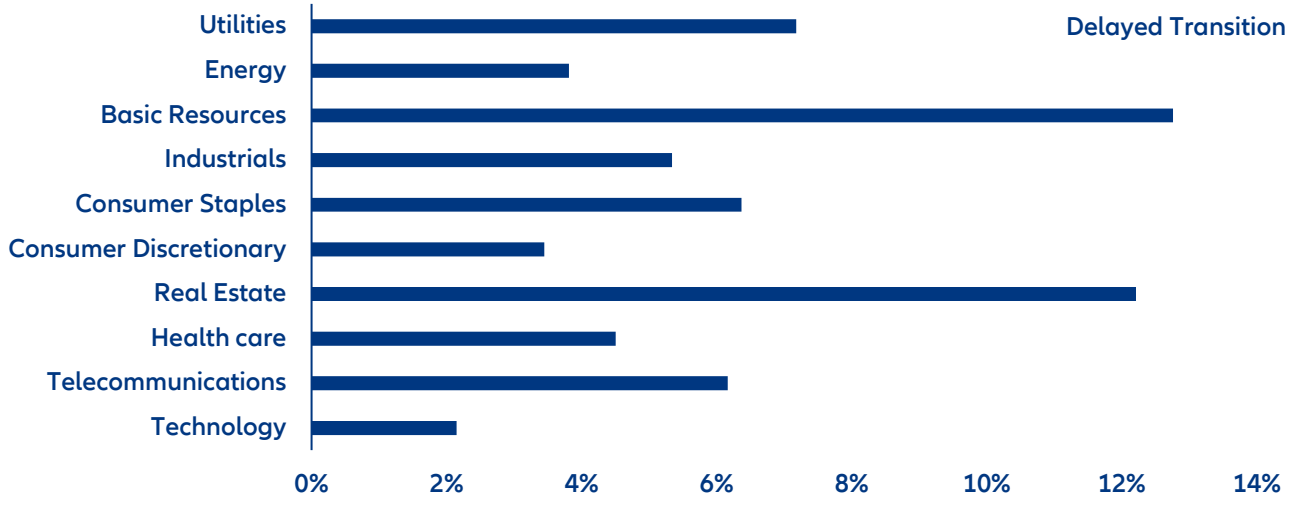
Figure 12: DCF results for US sectors – Delayed transition scenario



Sources: NGFS, LSEG Workspace, Allianz Research

In Europe, basic resources (+12.8%) and real estate (+12.2%) emerge as the biggest winners of a Delayed Transition scenario. Slower policy shifts would allow real estate firms to delay expensive retrofitting and maintain strong cash flows, while basic materials producers would enjoy steady demand and lower near-term compliance costs. The utilities (+7.2%) and consumer staples (+6.4%) sectors would also post solid gains, benefiting from moderate regulatory pressure and relatively stable input costs. Meanwhile, telecommunications (+6.2%) and industrials (+5.3%) would see respectable growth, helped by incremental energy-efficiency measures and a gradual approach to low-carbon transitions. Healthcare (+4.5%) would maintain moderate gains, reflecting the sector's steady demand and manageable climate-related risks. Energy (+3.8%) would see modest upside as fossil fuels remain in use for longer, though rising transition costs would curb further growth. Consumer discretionary (+3.4%) would benefit from continued consumer spending but face potential headwinds from shifting preferences and carbon-related expenses. Finally, technology (+2.1%) would register the smallest gain: although delayed regulations would provide short-term relief, the sector's reliance on rapid innovation and low-carbon infrastructure would limit its advantage in a slower transition environment (Figure 13).

Figure 13: DCF results for European sectors – Delayed transition scenario



Sources: NGFS, LSEG Workspace, Allianz Research

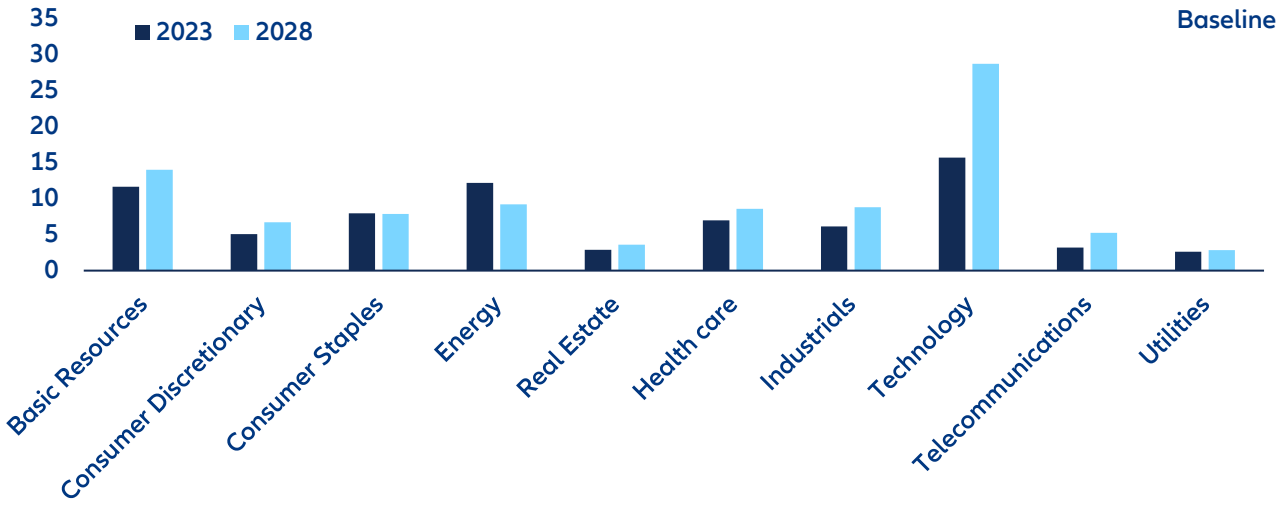
Overall, the Delayed transition scenario alleviates immediate decarbonization pressures for most sectors in both the US and Europe. However, investors should be cautious: the risk of abrupt policy shifts remains and the prolonged neglect of climate concerns could lead to sudden, more severe interventions down the line, creating significant long-term vulnerabilities for unprepared portfolios.

The Interest Rate Coverage (ICR) ratio can also be used with NGFS scenarios to identify the effects of climate transitions on sector valuations. The ICR ratio measures how many times a company's earnings before interest and taxes (EBIT) can cover its interest expenses. A higher ICR indicates stronger financial stability and debt-servicing ability, making it a useful metric for both investors and creditors. Companies usually use the ICR to assess whether current earnings are sufficient for interest payments. Similarly, external stakeholders, such as lenders and credit rating agencies, view a low ICR as a potential signal of liquidity issues and increased default risk.

In the Baseline NGFS scenario, the ICR ratio for technology in the US would surge from 15.8 in 2023 to 28.8 by 2028, indicating strong earnings and minimal debt concerns. Basic resources would also improve (from 11.7 to 14.0), reflecting steady demand, while energy would see its ICR decline from 12.2 to 9.2, partly due to the transition toward renewables. The ICR for industrials and healthcare would climb (6.1 to 8.8 and 7.0 to 8.6, respectively), suggesting stable profits and manageable debt, while that of consumer discretionary would rise modestly (from 5.1 to 6.7) on recovering spending, whereas that of consumer staples would remain almost unchanged (8.0 to 7.9). The ICR of telecommunications would improve from 3.2 to 5.3 but that of real estate (from 2.9 to 3.6) and utilities (from 2.6 to 2.9) would remain the lowest, reflecting high leverage and interest-rate vulnerability. Overall, the Baseline scenario projects broad gains by 2028, with technology far ahead. However, high-leverage sectors like real estate and utilities remain more exposed to potential debt pressures (Figure 14).

In Europe, the ICR of technology would see a slight uptick – from 18.15 in 2023 to 19.03 by 2028 – suggesting healthy earnings and minimal debt issues. Meanwhile, the ICR of basic resources would drop sharply from 8.67 to 3.58, reflecting softening commodity demand, while that of energy would see a milder decline (from 10.42 to 9.99) amid a shift toward renewables. Both industrials and healthcare would see their ICR expand

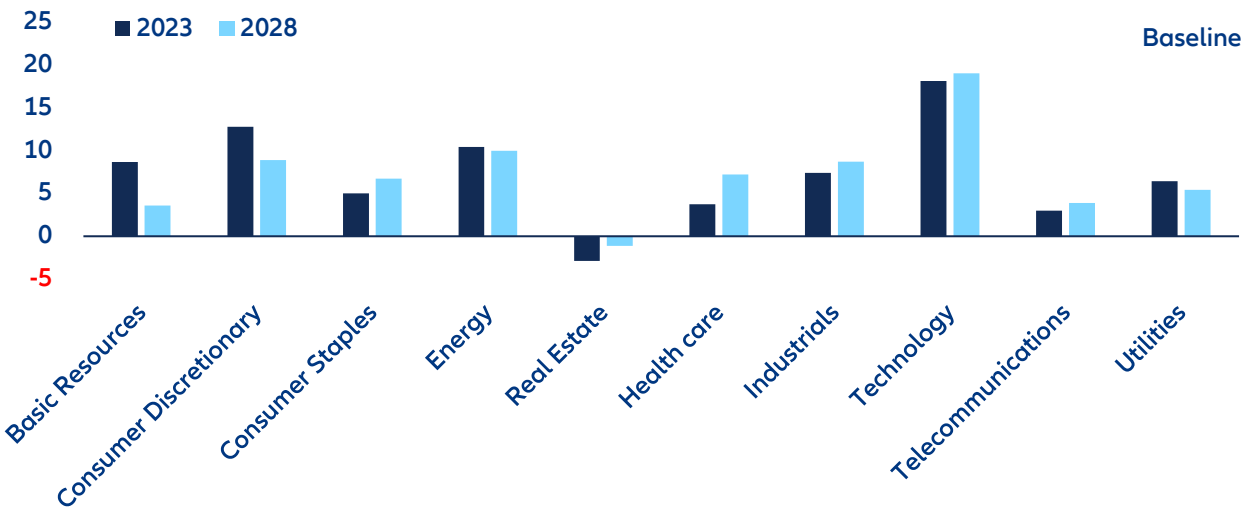
Figure 14: ICR results for US sectors – Baseline scenario



Sources: NGFS, LSEG Workspace, Allianz Research

notably (from 7.41 to 8.71 and 3.73 to 7.20, respectively), indicating stable profits and manageable debt. The ICR of consumer discretionary would contract from 12.78 to 8.90, pointing to slower spending, whereas that of consumer staples would edge up from 5.02 to 6.73. The ICR of telecommunications would improve from 2.97 to 3.86 but that of real estate would remain negative (from -2.88 to -1.13), and the ICR of utilities would move down (from 6.43 to 5.43), revealing high leverage and rate sensitivity. Overall, the forecast suggests moderate shifts by 2028, with technology maintaining a strong position. However, basic resources and real estate appear more vulnerable, emphasizing the need for prudent debt management (Figure 15).

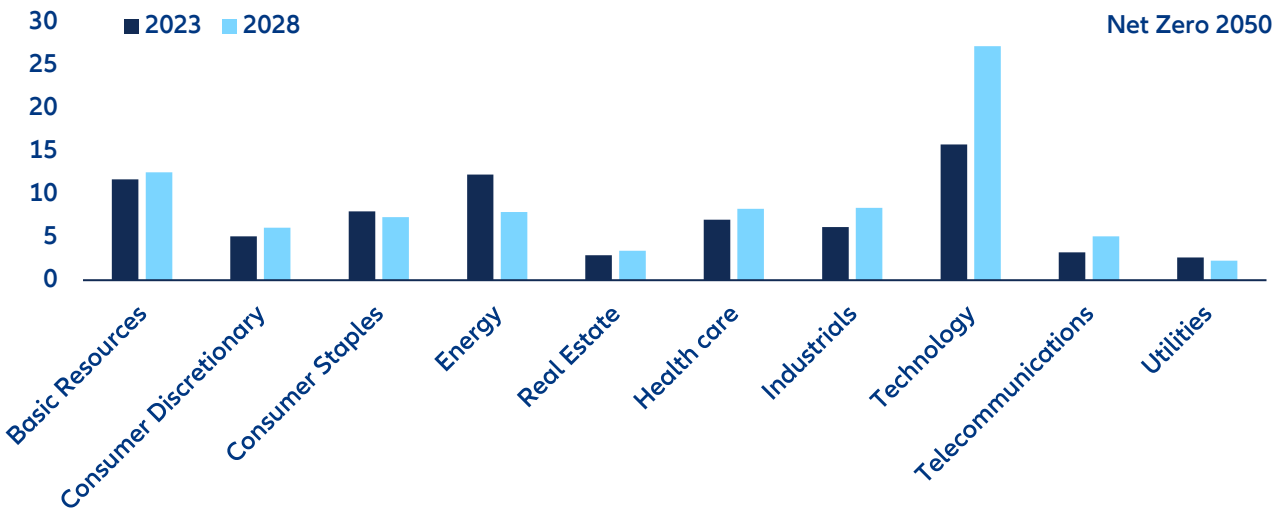
Figure 15: ICR results for European sectors – Baseline scenario



Sources: NGFS, LSEG Workspace, Allianz Research

The Net Zero 2050 scenario would lead to a dramatic rise in the ICR for technology in the US – from 15.75 in 2023 to 27.12 by 2028 – indicating strong investment in digital solutions and minimal debt concerns. The ICR of Basic resources would also improve (from 11.7 to 12.51), reflecting steady demand for raw materials in a greener economy, while energy would see a notable drop (from 12.23 to 7.91) as fossil-fuel models give way to clean-energy commitments. Industrials and healthcare would both show healthy gains (from 6.14 to 8.39 and 7.01 to 8.26, respectively), suggesting stable profits and manageable liabilities. The ICR for consumer discretionary would edge up from 5.08 to 6.07, supported by a gradual recovery in consumer confidence, whereas that of consumer staples would dip from 7.99 to 7.29, signaling modest adjustments in essential spending. The ICR of telecommunications would nearly double (from 3.23 to 5.08), benefiting from heightened connectivity needs. Meanwhile, the ICR of real estate would creep upward (from 2.9 to 3.39), although high leverage and interest-rate sensitivity remain concerns. The ICR of utilities, at 2.63 to 2.27, would hover near the lower end, underscoring ongoing challenges tied to capital-intensive projects and regulatory changes. Overall, by 2028, technology would clearly outperform under the Net Zero 2050 agenda. However, energy and utilities would face headwinds as the US economy transitions to more sustainable practices (Figure 16).

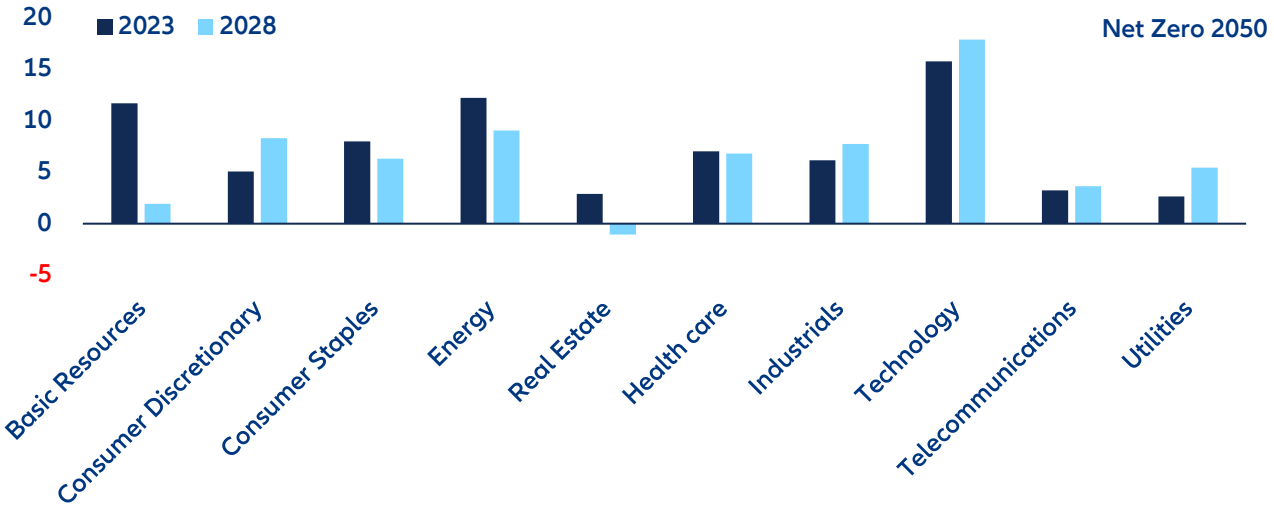
Figure 16: ICR results for US sectors – Net Zero 2050 scenario



Sources: NGFS, LSEG Workspace, Allianz Research

For Europe some sectors demonstrate strong momentum, while others face headwinds. Consumer discretionary's ICR would rise markedly from 5.08 to 8.31, suggesting renewed spending and a positive outlook. Industrials would also gain ground (from 6.14 to 7.75), reflecting resilient manufacturing activity despite sustainability-driven transitions. Meanwhile, the ICR of technology would edge up from 15.75 to 17.88, underscoring ongoing digital innovation and relatively mild debt risks. In contrast, the ICR of basic resources would plunge from 11.7 down to 1.92, indicating substantial pressure on resource extraction industries as Europe accelerates its low-carbon policies. The ICR of energy would decline from 12.23 to 9.05, though remaining at a relatively higher level than some other sectors, likely due to the gradual pivot toward cleaner energy sources. Meanwhile, the ICR of real estate would move into negative territory (from 2.9 to -1.07), suggesting persistent challenges with leverage, interest rates or regulatory changes aimed at reducing emissions. The ICR of utilities would more than doubles (from 2.63 to 5.42), hinting at increased investment in green infrastructure projects. Telecommunications' ICR would post a moderate uptick (from 3.23 to 3.64), aided by continued demand for connectivity. The ICR of consumer staples would slide from 7.99 to 6.31, pointing to potential shifts in consumer behavior and pricing dynamics, while that of healthcare would see a slight dip (from 7.01 to 6.81), reflecting cost pressures and evolving policy frameworks. Overall, these figures signal that Europe's decarbonization drive benefits certain sectors more than others, with technology and industrials showing resilience, while basic resources and real estate face heightened risks in an increasingly climate-conscious market (Figure 17).

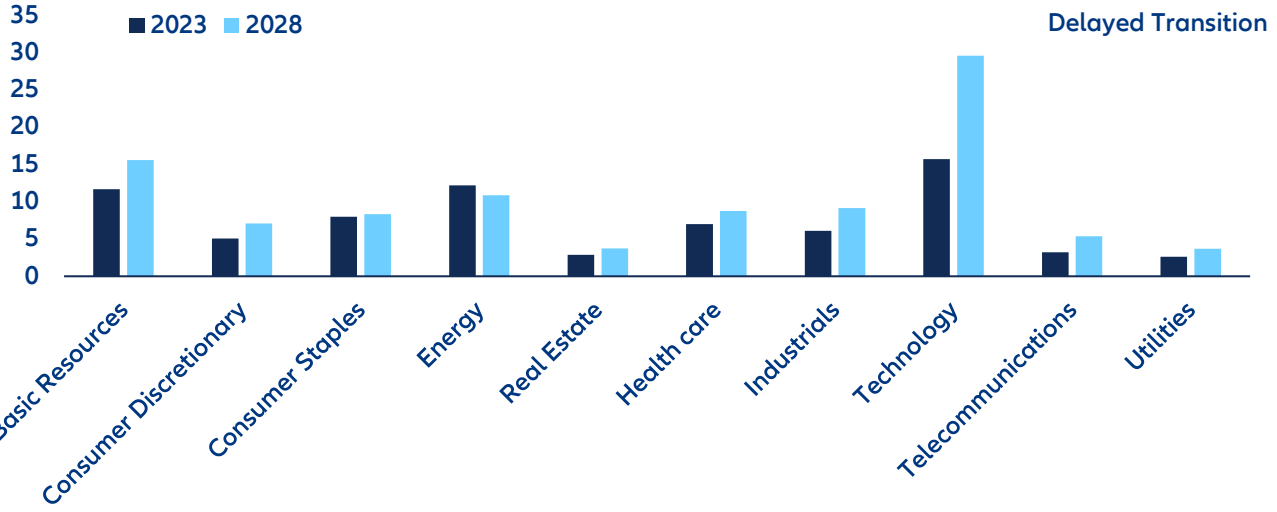
Figure 17: ICR results for European sectors – Net Zero 2050 scenario



Sources: NGFS, LSEG Workspace, Allianz Research

Under the Delayed Transition scenario in the US, technology's ICR would soar from 15.75 in 2023 to a notable 29.63 by 2028, reflecting strong investment flows and manageable debt levels. Basic resources would also post a considerable uptick (from 11.7 to 15.59), indicating sustained demand for raw materials despite a slower shift to cleaner energy. Meanwhile, the ICR of energy would dip from 12.23 to 10.89, suggesting moderate pressure on fossil-fuel operations. Consumer discretionary and consumer staples would both expand – moving from 5.08 to 7.13, and 7.99 to 8.37, respectively – underscoring stable consumer spending patterns. The ICR of healthcare would rise from 7.01 to 8.78, and that of industrials would climb from 6.14 to 9.16, pointing to robust core demand and manageable financing. In contrast, real estate's ICR would see only modest improvement (from 2.9 to 3.74), hinting at ongoing leverage and interest-rate sensitivity. Telecommunications' ICR would advance from 3.23 to 5.37, buoyed by connectivity needs, while that of utilities (at 2.63 to 3.72) would remain on the lower side, partly due to capital-intensive projects and slower decarbonization measures. Overall, the Delayed Transition favors sectors like technology and basic resources, though energy and real estate would still face challenges as the move to a greener economy proceeds more gradually (Figure 18).

Figure 18: ICR results for US sectors – Delayed transition scenario

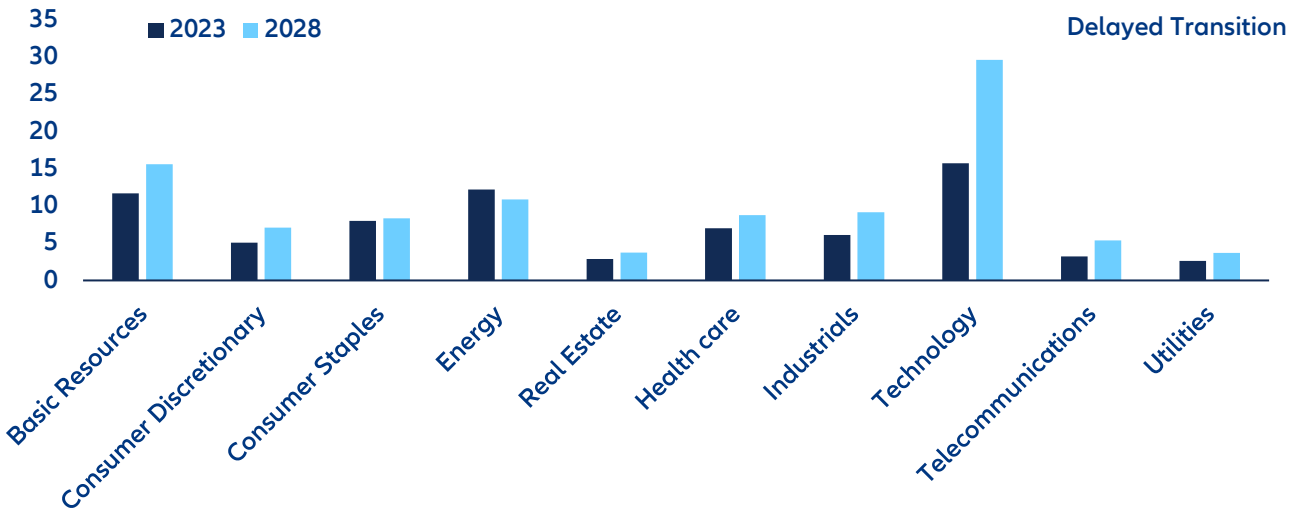


Sources: MPP, Allianz Research

Under the Delayed Transition scenario in Europe, the ICR of Technology would continue to expand, moving from 15.75 to 19.46, indicating robust demand and limited debt pressure even amid slower climate policy shifts. The ICR of consumer discretionary would more than double (from 5.08 to 9.17), reflecting renewed consumer confidence, while that of industrials would also jump (from 6.14 to 9.33), suggesting resilient manufacturing activity. In contrast, the ICR of basic resources would plunge from 11.7 down to 4.98, highlighting a cooling demand for raw materials when policy momentum is delayed. The ICR of energy would moderate (from 12.23 to 10.58) but remain relatively elevated compared to other sectors, possibly buoyed by ongoing fossil-fuel reliance. The ICR of real estate would slip into negative territory (from 2.9 to -1.14), signaling persistent leverage challenges. Meanwhile, that of consumer staples would edge slightly lower (from 7.99 to 6.95) and healthcare would inch upward (from 7.01 to 7.35). The ICR of utilities would more than double (from 2.63 to 6.88), likely driven by infrastructure investments and continued demand for essential services, while telecommunications would see a modest improvement (from 3.23 to 3.95), supported by ongoing connectivity needs. Overall, a delay in transitioning to cleaner energy sources would reshape sector performance, with technology and consumer discretionary benefiting, while basic resources and real estate come under pressure (Figure 19).

Overall, our analysis emphasizes that an orderly transition toward a sustainable economy is not only good for the planet but also good for long-term asset values and financial stability. An orderly, proactive transition – as envisioned in the Net Zero 2050 scenario – provides a more predictable framework that not only smooths asset repricing but also stabilizes key financial indicators. In contrast, a delayed or disorderly transition could precipitate abrupt devaluations and cascading financial stresses across interconnected sectors, ultimately amplifying the overall risk to portfolios. As sectors ranging from real estate and automotive to technology grapple with rapidly evolving climate risks, it is essential to embed rigorous, forward-looking climate risk assessments into both sector-level strategies and broader portfolio management. By fostering an orderly transition underpinned by precise DCF valuations and vigilant ICR monitoring, investors and policymakers can better protect long-term portfolio value, ensuring that capital allocation remains both resilient and adaptable to emerging challenges.

Figure 19: ICR results for European sectors – Delayed Transition scenario



Sources: MPP, Allianz Research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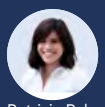

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