CARMIGNAC
INVESTING IN YOUR INTEREST

# CARMIGNAC'S 2026 SUSTAINABLE INVESTMENT OUTLOOK

MARKETING COMMUNICATION

# 2025 RECAP

The exercise of our voting rights using proxy voting is an essential part of Carmignac's commitment to active ownership and we take our responsibility seriously. This is reflected in our objective of 100% voting participation for all voteable meetings on behalf of our clients across shareholder and bondholder meetings.

There was no shortage of headlines on the challenges for sustainable investment in 2025. From Trump's policy, Article 9 fund outflows and industry debates over defense exclusions, a negative perception was inevitable. The reality, however, was more nuanced.
Beyond the headlines, underlying data were far more constructive. Public markets rewarded parts of the energy transition complex; corporates largely maintained sustainable capex (albeit with a little less fanfare); and the political backlash proved less effective in practice than rhetoric. In other words, fundamentals, technology deployment and governance signals mattered more than headlines and politics.

In a nutshell:

- Returns from clean energy (44%1[1]) easily outstripped oil and gas (17%2[2]) in 2025 and the once rigid link between economic growth and carbon emissions is breaking across 92% of global GDP3[3]. For the fourth consecutive year, Wall Street's largest banks earned more from financing green projects than from fossil fuel ventures, generating about $3.7 billion in revenue from climate-related loans and bond underwriting in 2025, compared with roughly $2.9 billion from oil, gas, and coal[4].
- Even in the US, 87% of surveyed companies maintained or increased sustainability-aligned investment, with 31% investing more (but promoting less) and only 7% cutting investment[5].
- Only 11 of 106 proposed anti-ESG state laws passed in the US[6] and anti-ESG AGM resolutions received, on average, only 1.4% support[7] demonstrating that investors and regulators appreciate the financial materiality of ESG.
- Europe and emerging market countries continue to progress sustainability initiatives.China's foresight in owning the clean energy technology space, Korea's Value Up governance campaign (estimated to have driven 30% of the 79% KOSPI rise in value in 2025[8]) and Europe's pragmatic reset for sustainability regulation all indicate sensible pathways for future resilient growth.

Further thoughts on 2025 can be found in our Sustainable Investment Retrospective including commentary on South Korea's Value Up program, defence, AI, clean energy, sin-stock performance and labelled bonds.

[1] Ishares Global Clean Energy ETF
[2] MSCI World Integrated Oil and Gas Index
[3] 10 Years Post-Paris: How emissions decoupling has progressed; Energy and Climate Intelligence Unit
[4] Banks Notch Higher Fees From Green Bonds Than Fossil Fuel Debt - Bloomberg
[5] Ecovadis (2025) U.S. Business Sustainability Landscape Outlook: Executive Perspectives on Supply Chain Disruption, Resilience and Competitiveness
[6] Columbia Law School Blog (2025) State Anti-ESG Movement Evolves to Target Investor Access citing underlying data from Pleiades Strategy Live Anti-ESG State Action Tracker
[7] Harvard Law School Forum on Corporate Governance: Shareholder Proposal Developments During The 2025 Proxy Season
[8] Morgan Stanley: Korea's Value-Up 2.0: Only Half the Story

# GLOBAL CONTEXT

Modern economic and market development rests on four enabling conditions: institutional integrity, long stewardship time-horizons, evidence-based decision-making and competition. Each is currently under pressure in key regions and industries.

Governance degradation and policy volatility in the US[9]; short-term optimization and myopic incentives in artificial intelligence (AI); the undermining of science and social norms in fractured information systems; and a winner-takes-most concentration across key industries[10]. Together, these 'cracks' amplify K-shaped inequality and environmental system degradation.

We believe the consequence is a future of higher disruption and lack of conventionality due to greater policy shocks and tail-risk fruition. Short-term political narratives may oscillate, but economies and markets ultimately live and price within environmental and social systems - and all those systems depend on effective governance.

These relationships are structural and can only be ignored or degraded until they reassert themselves through higher risk and cost.

But there are reasons to be positive. The clean-tech transition continues to take market share rooted in cheap Chinese technology leadership and EU regulation, and emerging market corporate governance is materially improving. Both present opportunities.

[9] World Justice Project (2025), Rule of Law Index
[10] American Economic Review (2024), 100 Years of Rising Corporate Concentration

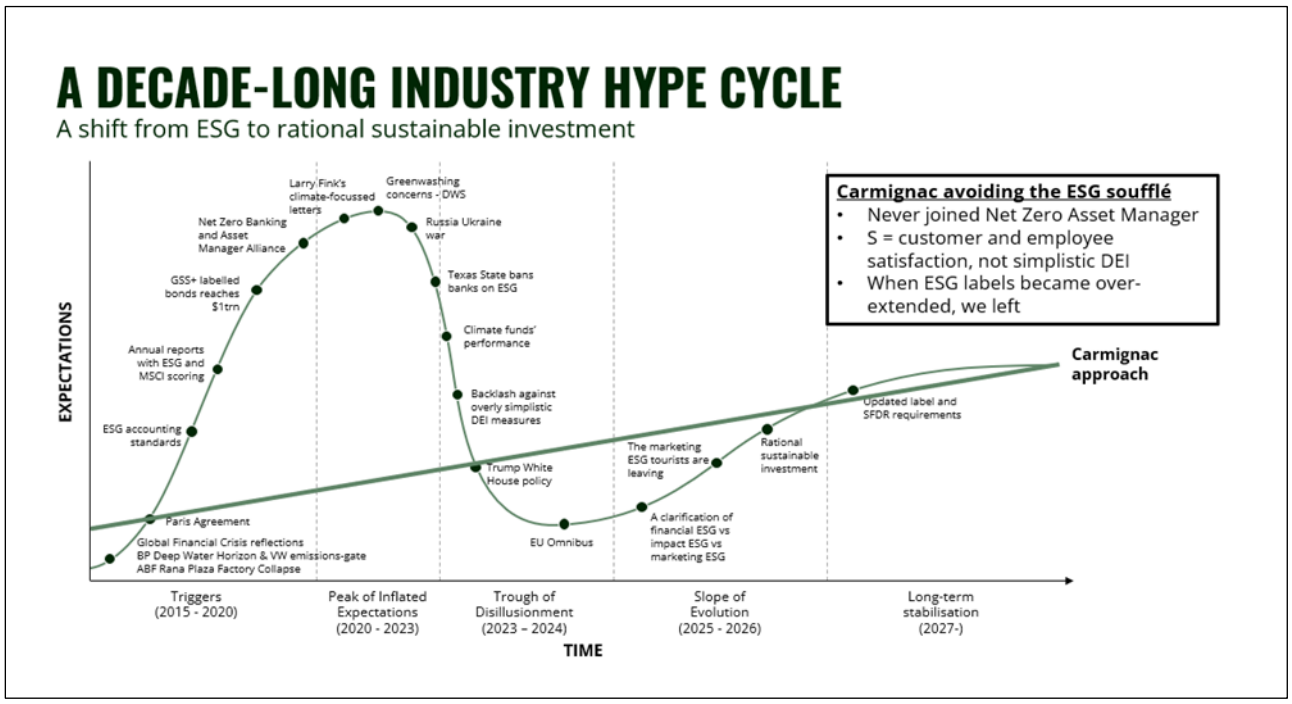
# THE BIG PICTURE

## DEFINING ESG

The 'cartoon' definition of ESG as being primarily about renewables, ethics, and exclusions has largely given way to ESG integration – where ESG factors are incorporated into investment decisions to manage risk-adjusted returns – however, this shift is not absolute. Looking ahead, we expect the articulation of sustainable investment to continue evolving in 2026. Below, we highlight the evolution of ESG over the past decade and explore its potential future trajectory.

**FIGURE 1: THE EVOLUTION OF ESG INVESTING**[11]

*ESG turned from a useful alternative dataset as 'big data' happened, to a product - resulting in oversimplification and extended claims - followed by a backlash and now, we've reached a new equilibrium.*




We continue to believe, as highlighted in previous outlooks, that this conceptual evolution will take shape in the form of investment system stewardship, whereby responsible 'stewards' of capital look at the rules and behaviors of markets and market participants as a whole in the pursuit of long-term value creation. As active managers, we rightly obsess over the returns driven by active investment selection (alpha), but a material proportion of client's experience over time is driven by the health of the market itself (beta). As a result, we frame sustainable investment as being a set of portfolio tools that can be considered from an alpha and beta perspective.

- **The α-partner**: issuer-level ESG risk and opportunity (security-picking, engagement, thematic insights), helping to assess ESG fundamentals, avoiding idiosyncratic ESG blow-ups (α-protection) or finding investment opportunities (α-generation).

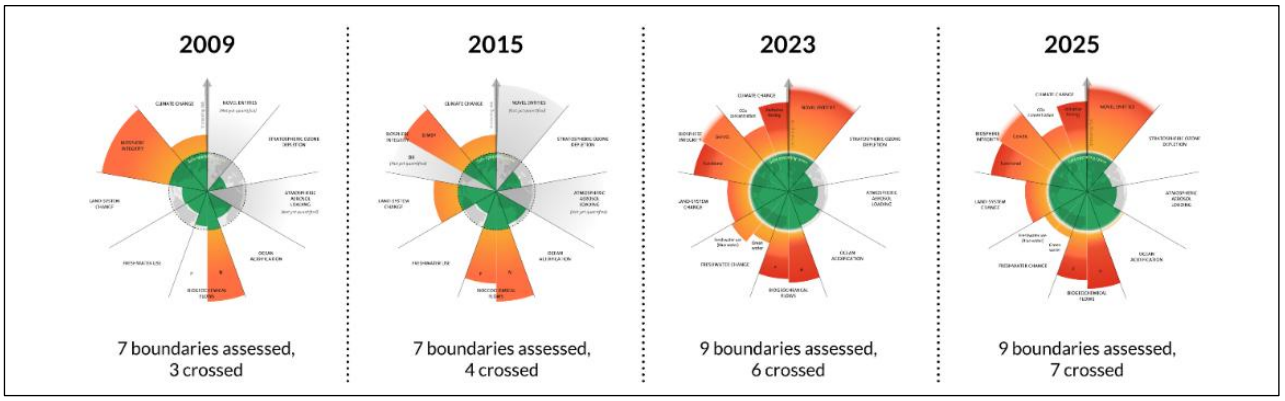
[11] Sources: Carmignac Data, 2025

- **The β-steward**: foundation layer of markets that determines the average outcome across portfolios – rule of law, climate stability, information integrity and AI safety, anti-microbial resistance and pandemic preparedness, stable social contracts etc – that are difficult to diversify away. We seek to support the broader health of markets and to steward capital in a way that enables market resilience by investing in solutions and engaging with poor performers. This includes collaborative and regulatory engagements such as Climate Action 100, the Coalition for Ethical AI and Nature Action 100.

Tools are emerging to support this approach.

One of those is the Planetary Boundaries framework[12]. This provides quantitative assessments of the safe limits for human pressure on nine critical global change processes. Crossing boundaries increases the risk of generating large-scale abrupt or irreversible changes and together mark a critical threshold for risks to societies and markets. Asset owners are increasingly interested in this framework as it explains the root cause of investment themes like Chinese clean tech and European environmental regulation.

**FIGURE 2: PLANETARY BOUNDARIES FRAMEWORK**




## SFDR 2.0

The forthcoming introduction of SFDR 2.0 in a few years means asset management firms will start assessing their fund range against the EU's new sustainable finance regulations. There are 21 detailed changes but the top three, in our view, are:

a) The creation of a new Article 6a category that maintains the use of ESG to the extent that is helpful for managing sustainability risks, with some new light disclosure requirements.

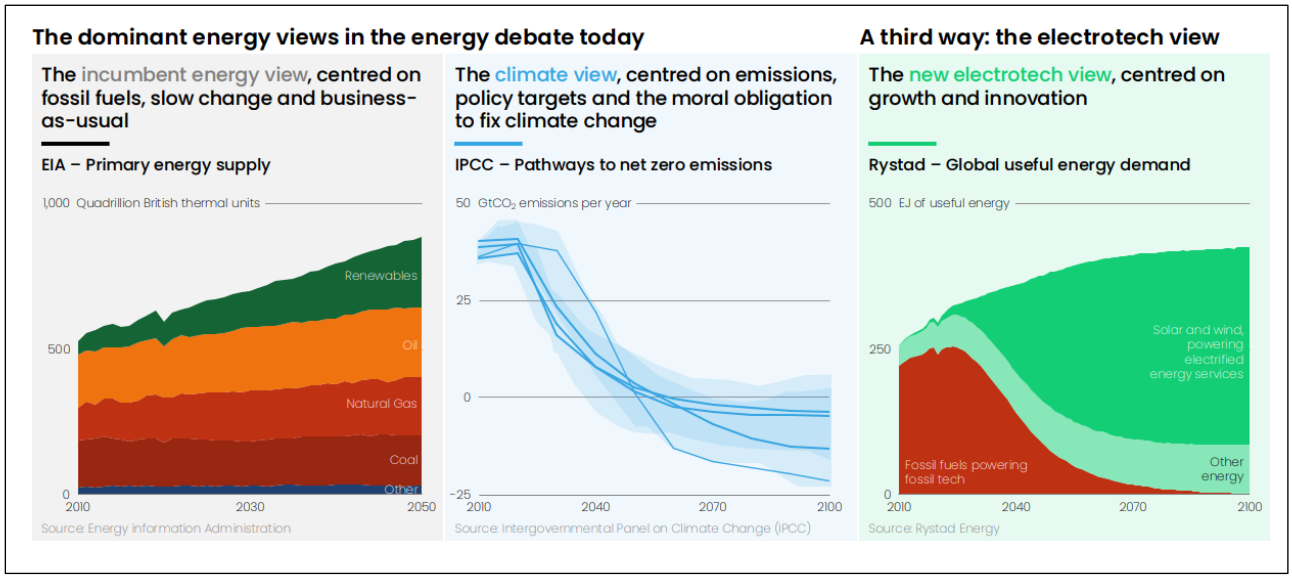
b) Article 8 funds are now called 'ESG basics' and will have to adhere to some new light exclusions and a new 70% rule. This proportion of the fund is required to beat the average of a pre-defined ESG score or specific metric, be invested in companies with solid ESG processes or 'self-describes' an alternative process.

c) Article 9 funds get some increased flexibility – now requiring only 70% of the fund to be sustainable assets, compared with the previous regime of effectively 80-90% once taking into account cash and positions for hedging and liquidity.

[12] Planetary boundaries - Stockholm Resilience Centre

# ENVIRONMENTAL OUTLOOK 2026

While at the highest level, many global environmental indicators are flashing red, there are many areas of progress with clear investment opportunities. The heart of this is the electro-tech revolution. This is the shift from hunting and burning fossil commodities (which has inherent geopolitical insecurity and price risk) to farming and storing inexhaustible, efficient and cheaper renewable energy[13] .




## KEY ENVIRONMENTAL-FOCUSED INVESTMENT THEMES

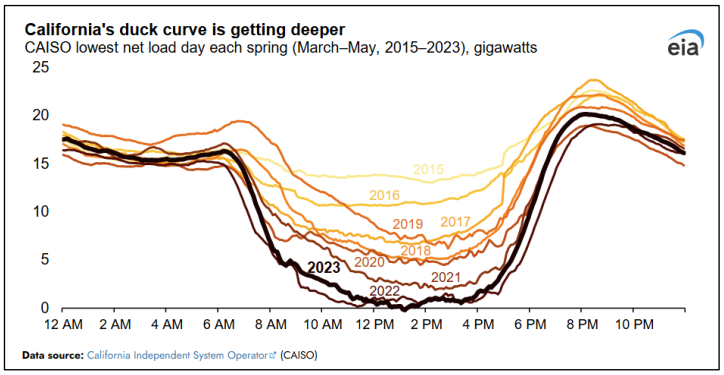
### 1. ENTERING A (POTENTIALLY SHORT) GOLDEN AGE FOR BATTERY STORAGE PROJECTS

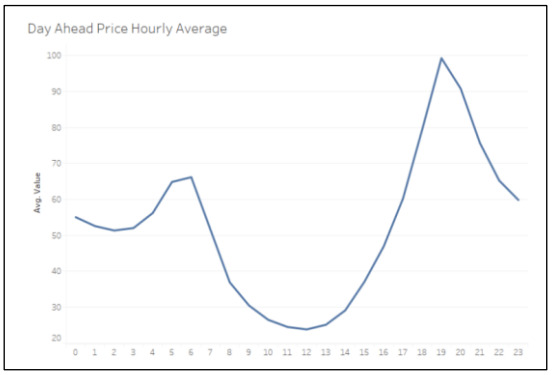
While tremendously improving cost economics have allowed solar projects to flourish in recent years. Yearly solar PV[14] capacity additions exceeded 500GW globally in 2024 and 2025, representing about 70% of all capacity additions[15]. Solar has an increasing role to play in the supply of electricity for our grids and meeting the ever-growing need for greener electrification. However, this has led to the duck curve phenomenon, which portrays the systemic risks linked to over-reliance on intermittent sources of energy. As the share of solar increases in the mix, the net load[16] that the grid needs to manage reduces and becomes more unequal. This creates strain on grid operators who need to juggle an abundance of solar generation during a few hours in the day and steep ramp-ups or wind-downs with other generating assets either side of that.

In liberalised wholesale markets, this also translates into large intraday spreads between much lower power prices during prime solar generation times and peak prices in the early evening.

[13] Ember (2025); The Electrotech revolution
[14] PV : photovoltaic
[15] Renewables 2025 | IEA
[16] Net load = total electricity demand minus the generation from wind and solar sources

**FIGURES 3 & 4: AN EXAMPLE OF A DUCK CURVE FROM THE CALIFORNIAN POWER MARKET NET LOAD[17] AND CONCURRING PRICE CHART[18]**




This has been known for years, and many battery storage projects around the world have been taking advantage of this arbitrage opportunity. Recently, changing economics have created a favourable environment for developing more battery storage projects. The large-scale power outage that struck Madrid in April 2025, which paralysed the city – extending to neighbouring regions as well as Portugal and parts of Southern France – served as a stark reminder of our reliance on the electric grid and the urgent need for back-up solutions.

Despite power price spreads already contracting in some markets (UK, California), evidenced by reduced revenues for some earlier projects, the significant tailwind from low battery prices has made new battery projects attractive again.

Estimates show that battery storage capacity is set to grow 4.5x by 2030 and 8x by 2035 from 2024 levels[19]. The outcome of this opportunity depends on the speed at which these battery storage projects can scale and advance towards ever cheaper battery technology. Gradually, as more battery storage projects see the light of day, intraday power price spreads will contract, offering worse returns. With battery pack prices flattening in a highly oversupplied market, there is a short window in the coming years (2026 being a key one) to integrate battery storage equipment into new or existing solar facilities. Rather than pursuing investment opportunities in the battery manufacturing companies who operate in a nearly commoditized market, we see greater potential in EPC[20] companies and players that can leverage existing solar PV capacity within this theme.

## 1. ENTERING A (POTENTIALLY SHORT) GOLDEN AGE FOR BATTERY STORAGE PROJECTS

Faced with mounting electricity needs, generating efficiencies is a big priority for hyperscalers, and cooling seems to be an obvious area. PUE[21], the industry metric for data centre power efficiency, has declined over the past decade, reflecting significant efficiency gains even as computing power and thermal design power (TDP, the heat generated by a chip) have increased substantially.

The cooling choices made by the operator have a big impact on this metric. Cooling relies on two distinct systems, the main technology cooling system and the heat rejection system. Technology cooling systems

[17] As solar capacity grows, duck curves are getting deeper in California | US EIA
[18] CAISO Intraday & Day-ahead Price Forecast Case Study Solution
[19] World Energy Outlook 2025 | IEA
[20] Engineering, Procurement, and Construction
[21] PUE: Power Usage Effectiveness (power used / computing power)

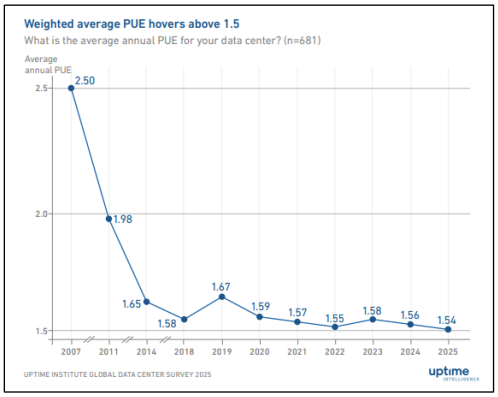
have become more electricity- and cost-efficient, particularly as computing power increases. In this segment, liquid cooling technologies like direct-to-chip or immersion cooling are replacing inefficient air-cooling technologies.

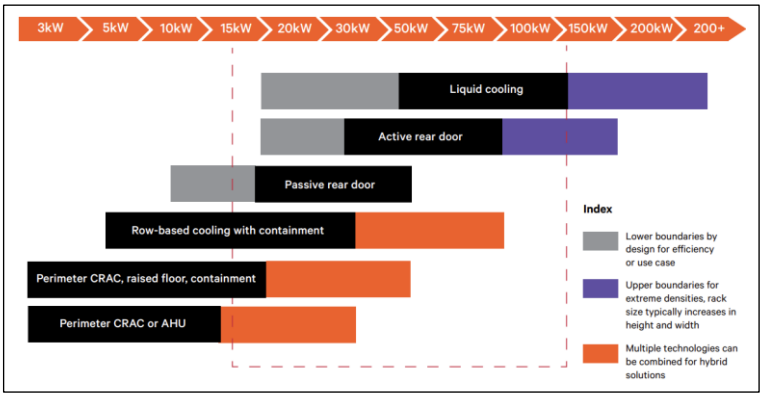
For new AI data centres, where rack densities often exceed 50 kW, liquid cooling has become the standard. Modern facilities that use water for cooling employ closed-loop systems, meaning most water consumption occurs during initial setup. This significantly reduces ongoing usage and helps alleviate concerns about water stress.

The heat rejection system – the second part of the cooling process – remains central to managing the water efficiency of data centres. Technologies range from evaporative heat rejection (the most water intensive but least power-heavy method) to dry heat rejection (which is the least water-intensive but most power-demanding). The ultimate choice of preferred technology is based on a combination of factors such as local water availability/scarcity, grid mix quality, and cost. There is evidence that hyperscalers are already taking water-conscious decisions to achieve higher PUE targets, as shown by Microsoft's latest commitments for its future data centres[22] or Amazon's pledge to become water positive by 2030[23].

With water already extensively addressed by hyperscalers and positive trends emerging from disclosed figures, we believe the water theme could shift elsewhere in 2026. Beyond new irrigation technologies such as drip and micro irrigation or drought tolerant crop genetics, we are especially interested in the desalination industry which has shown improving economics in recent years boosted by larger scale projects in the Middle East and the maturing of reverse osmosis technology. Demand has grown from around 1% of drinking water in 2017[24] to 4% in 2024[25], and going forward, the market is expected to grow at a high single-digit rate for the next decade[26], from around $20bn today. With La Niña conditions anticipated to persist into early 2026, amplifying drought and flood risks in regions, and the UN Water Conference scheduled for December in the UAE, we expect water sourcing to take a more prominent role in the global policy and investment narrative in 2026

**FIGURES 5 & 6: TREND IN DATA CENTRE PUE[27] AND DIFFERENT COOLING TECHNOLOGY USE CASES FOR DIFFERENT RACK DENSITIES[28]**




[22] Sustainable by design: Next-generation datacenters consume zero water for cooling | Microsoft
[23] Water stewardship - Amazon Sustainability
[24] The Role of Desalination in an Increasingly Water-Scarce World, 2019, World Bank
[25] IDRA – Desalination & Reuse Handbook 2025-2026
[26] Global Water Desalination Market YoY Growth Rate, 2025-2032, Coherent Market Insights
[27] Uptime Institute Global Data Center Survey Results 2025
[28] 2023 Data Center Liquid Cooling Technology and Market Update - Vertiv

# 2026: THE YEAR OF BREAKTHROUGHS IN TRANSITION TECHNOLOGIES?

| | WHAT? | WHY? | WHO? | WHEN? | LINKS |
|---|---|---|---|---|---|
| **Solid state EV batteries** | Replacing liquid electrolyte in a battery with a solid electrolyte | Higher battery density (faster charging – 10mins to fully charge), higher battery capacity (more range – 1,000km), less resource footprint, lighter, smaller, safer | Led by Auto OEMs and battery manufacturers (Toyota, Nissan, Honda, Hyundai, CATL, VW, Samsung SDI, QuantumScape) | Commercialisation of EVs with solid state batteries 2026-2030 | Link 1<br>Link 2 |
| **Superconducting cables** | Electric transmission cables made of superconductive material (BSCCO, YBCO, $MgB_2$) | Maximising transmission, by increasing capacity and nearly eliminating energy loss<br>Other applications of superconductors for transport (MagLev) and energy storage (SMES) | Cable manufacturers (Nexans, Prysmian) with power transmission companies set to benefit from this | Already in use in pilot projects, wider implementation by 2030 | Link 1<br>Link 2<br>Link 3 |
| **Perovskite-silicon "tandem" cells or other third-generation solar cells** | Stacking PV cells with a thin layer of perovskite to capture larger array of photons | Aim is to increase the power conversion efficiency above the theoretical maximum of 29% (current efficiency levels are around 25%) for 1st generation silicon solar cells, up to ~35% | Currently developed by private companies / laboratories and Chinese solar cell manufacturers (LONGi) but with wider implications on solar supply chain and power generators | Commercially viable to produce by 2030 | Link 1<br>Link 2<br>Link 3 |
| **SOEC - Solid oxide electrolysis** | SOECs enable highly efficient splitting of steam into hydrogen and oxygen compared to AE and PEM electrolysers due to the higher temperatures employed | Highly efficient and cost-effective way of producing green hydrogen. Will enable to boost the production of green hydrogen, essential in decarbonising high emissions sectors (Steel, Transport, Energy) | Fuel cell manufacturers (Plug Power, Siemens Energy, NEL) alongside private companies | Commercialisation at scale in the next decade or sooner depending on evolution of green hydrogen demand | Link 1<br>Link 2 |

# SOCIAL OUTLOOK 2026

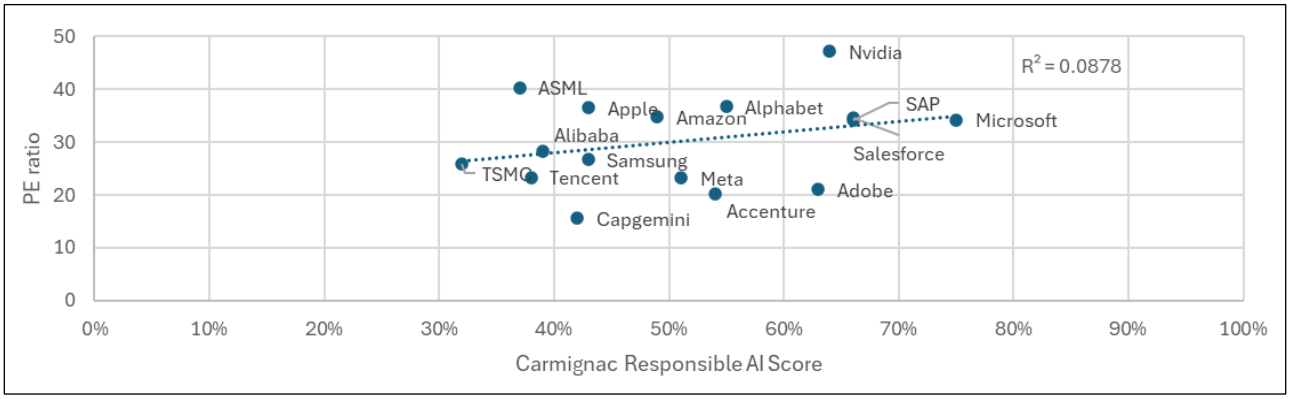
As we move into 2026, three social themes stand out: the widening gap between AI deployment and responsible governance, weakening supply chain standards and the role of defence in sustainable investments.

**AI SCALE-UP TENSIONS**: As the AI race accelerates, regulators remain behind, still debating core issues such as transparency, accountability, bias, intellectual property, and data use, largely at the model-developer level, while the EU rolls back its landmark AI regulation[29]. The result is a widening gap between Responsible AI (RAI) best practices and deployment at scale. This tension became apparent during the OpenAI governance crisis as investigations by the US Attorney General and sustained public scrutiny shaped the environment in which OpenAI opted for a more "responsible AI"-aligned governance framing, transitioning from a capped-profit structure to a public benefit corporation. We expect these governance tensions to persist as AI-related IPOs roll out in 2026, raising questions around founder control, dual-class share structures, minority shareholder rights, and AI safety obligations.

In 2026, we expect continued waves of headlines around positive AI-related use cases (such as advancements in natural resource use efficiency, speed and breadth of drug discovery and diagnostics, education tutoring efficacy and agentic customer service) as well as negative impacts (such as copyright/class-action cases, misinformation, misuse of synthetic media, and data breaches linked to AI tools). Market reactions to RAI have been virtually non-existent and limited to debate so far. While acknowledging deep expertise and improvements at companies like Microsoft, Anthropic and OpenAI, many others still view RAI more as a reputational shield than a genuine driver of share price multiples.

Carmignac's RAI score is only loosely correlated with multiples, explaining just 8.8% of the variance in AI-related company PE ratios (see chart below). However, as enforcement actions crystallise (e.g. landmark fines or binding case law) and safety incidents occur, the re-rating of companies with poor governance could be abrupt rather than gradual. A solid safety guardrail system for AI is essential to its long-term success, ensuring the topic remains a key focus for investor engagement.

**FIGURES 7: TO WHAT EXTENT IS THE MARKETPRICING RESPONSIBLE AI PRATICES?**




[29] https://theconversation.com/eu-proposal-to-delay-parts-of-its-ai-act-signal-a-policy-shift-that-prioritises-big-tech-over-fairness-268814

AI-driven job cuts will continue to be announced, concentrated in areas such as customer support, operations, basic coding and certain finance roles30. In the short term, these cuts can support company earnings, but firms risk backlash from employees, unions and policymakers, particularly in countries with strong employee social protection systems. We anticipate that the debate around AI and employment will become more balanced in 2026, supported by better data indicating that AI will create new jobs (an estimated 78m net new roles according to the World Economic Forum31) as productivity gains drive lower prices and higher demand, pulling labour into other segments of the economy. If AI proves to be so transformative that it results in significantly lower employment, discussions around AI taxation and universal basic income are likely to intensify.

**SUPPLY CHAIN STANDARDS WEAKENING**: In 2025, human-rights regulations such as the EU's Corporate Sustainability Due Diligence Directive (CSDDD), the Corporate Sustainability Reporting Directive (CSRD)32 and Germany's Supply Chain Due Diligence Act33 were watered down or targeted for repeal. This led to reduced requirements for companies to report on supply chain issues and weakened corporate accountability. Combined with increased cost pressures pushed down to suppliers, these developments could lead to deteriorating supply chain standards in 2026, including reduced wages, weaker safety investment, and greater reliance on informal or subcontracted labour in already high-risk sectors and countries. A less-stringent formal regime will likely increase the risk of informal NGO-led investigations being exposed in the press, making it critical for corporates to maintain robust systems given the reputation risks involved. As a result, we will need to assess supply chain disclosures carefully and engage proactively to identify signs of quality degradation.

**DEFENCE**: The claim that defence investing is sustainable often works as headline rhetoric but becomes complex under scrutiny. A spectrum of fund philosophies, client expectations, commercial ESG label requirements, international treaties, regulation, company practices and product end-use makes a simple "yes" or "no" answer something best left for pub chat.

In 2025, several European asset managers relaxed their defence exclusion policies to align with Carmignac's approach, allowing Article 8 funds to invest in conventional weapons, subject to bespoke due diligence and engagement where required. This drove Article 8 funds with exposure to aerospace and defence from 48% in 2024 to 56% in 2025.34 In 2026, we expect continued debate over whether to **reframe defence investments under the concept of "sustainability resilience"**. The ongoing Belgian ESG label consultation illustrates that direction of travel. Even so, this remains a topic where we must be explicit about objectives and safeguards – and bring clients with us – rather than moving faster than mandates and stakeholder expectations allow. Notably, JP Morgan's 2026 Outlook showed that while they initiated a review of their index defence exclusions, proposed changes were not supported by clients and therefore the exclusions were retained.

[30] AI cited in nearly 50,000 job cuts as tech giants accelerate automation - Los Angeles Times
[31] World Economic Forum (2025); The Future of Jobs Report
[32] https://www.business-humanrights.org/en/latest-news/eu-ohchr-publishes-commentary-on-omnibus-proposal-warns-that-omnibus-proposal-risks-backsliding-on-csddd/
[33] https://duediligence.design/german-government-published-draft-bill-to-remove-reporting-obligation/
[34] Sources: Morningstar data, 2025

# GOVERNANCE OUTLOOK 2026

**If 2025 revealed notable shifts in the balance of power between stakeholders, shareholders and management across markets, 2026 is set to see governments exerting greater intervention in shaping corporate governance rules and behaviour.**

**The US is the most striking and unexpected example of this reframing**. What began as a backlash against stakeholder capitalism – such as pressure on both US and multinational companies to dismantle Diversity, Equity and Inclusion (DEI) programmes – has moved far beyond that. In 2025, this shift accelerated, marked by the muting of shareholders in a regulatory environment shaped by the US administration. Some corporates have been allowed to default retail shareholder votes in favour of management at annual general meetings (AGMs), remove shareholder resolutions from AGM agendas, or bar shareholders from filing class-action litigation. While this development is often framed as a transfer of power from shareholders to management, the resulting increase in managerial autonomy is, in fact, illusory.

"I'm shocked by how frightened CEOs are," former Secretary of State John Kerry told the Financial Times in November 2025, referring to the retreat from green-energy investment since Trump's election. While political intervention remained largely muted under a market-led policy framework, the surge in national security and broader economic nationalism considerations has enabled more frequent and overt government involvement in corporate decisions. This shift became evident in 2025, notably through the introduction of a golden-share provision in the US Steel - Nippon Steel transaction, as well as heightened political intervention around Intel, including public pressure on its leadership. The resulting rebalancing is therefore not one of shareholder authority giving way to managerial autonomy. Instead, it reflects a shift from market-led governance toward increased state involvement in corporate decision-making. In 2026, this dynamic is likely to intensify as the US administration prepares to take additional direct equity stakes in strategically important industries.

In Europe, national security-related interventions also came to the fore in 2025, such as the Dutch government invoking emergency powers to take effective control of a domestic chipmaker and curtail the influence of its Chinese parent company. However, state involvement has long been part of the European governance landscape. While the current geopolitical environment makes further intervention on sovereignty or national security grounds in 2026 likely, this represents less of a step change. What is more distinctive is the growing emphasis on deregulation and simplification in the name of competitiveness, set against the backdrop of a changing world order. Consistent with the Draghi report's identification of equity markets as a strategic priority, and against a backdrop of rising de-listings, governments and regulators are increasingly willing to reconsider governance requirements. A more flexible approach, already under way in some markets, is likely to gain further traction in 2026, particularly as the absence of strong investor pushback continues to enable this trend.

**In Asia, domestic political incentives are also shaping governance trajectories heading into 2026**. Inspired by Japan's success and supported by the growth of retail investors, who in turn are voters, South Korea's government is focusing on increasing shareholder value. This is being pursued through a series of legal and exchange-driven reforms, such as the landmark introduction of a fiduciary duty for board directors

to shareholders. While the early stages of reform sparked significant investor enthusiasm, illustrated by the 2025 highs in the KOSPI index, 2026 will be the real test of the robustness of these initiatives including execution. In Japan, stakeholder considerations are likely to come to the fore with the newly elected Prime Minister signalling the need for corporates to address the longstanding issue of wage growth.

For years, investors assumed a gradual harmonisation of governance practices in an increasingly globalised world. That assumption no longer holds at a time when government-led interests are resurfacing and disrupting the traditional and predictable balance of power between management and shareholders. A key issue to watch in 2026 will be whether these developments trigger tensions with shareholders and how markets begin to price them in. Corporate governance is set to be increasingly used as a political instrument, underscoring its importance in a changing world order.

# DISCLAIMER